FLOOD INSURANCE STUDY

VOLUME 1 OF 2

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
*AMANDA, VILLAGE OF	390688
BALTIMORE, VILLAGE OF	390159
BREMEN, VILLAGE OF	390160
BUCKEYE LAKE, VILLAGE OF	390882
CARROLL, VILLAGE OF	390817
FAIRFIELD COUNTY (UNINCORPORATED AREAS)	390158
LANCASTER, CITY OF	390161
*LITHOPOLIS, VILLAGE OF	390044
MILLERSPORT, VILLAGE OF	390689
PICKERINGTON, CITY OF	390162
*PLEASANTVILLE, VILLAGE OF	391097
*RUSHVILLE, VILLAGE OF	390997
*STOUTSVILLE, VILLAGE OF	390998
SUGAR GROVE, VILLAGE OF	390163
TARLTON, VILLAGE OF	390902
THURSTON, VILLAGE OF	390690
*WEST RUSHVILLE, VILLAGE OF	391098

*NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED

Effective Date: January 6, 2012

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
39045CV001A

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) report may not contain all data available within the Community Map Repository. Please contact the Community Map Repository for any additional data.

The Federal Emergency Management Agency (FEMA) may revise and republish part or all of this FIS report at any time. In addition, FEMA may revise part of this FIS report by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS report. Therefore, users should consult with community officials and check the Community Map Repository to obtain the most current FIS report components.

Effective Date: **January 6, 2012**

Revised Date(s):

Selected Flood Insurance Rate Map panels for this community contain information that was previously shown separately on the corresponding Flood Boundary and Floodway Map panels (e.g., floodways, cross-sections). In addition, former flood hazard zone designations have been changed as follows:

Old Zone(s)	New Zone
A1 through A30	**AE**
B	**X (shaded)**
C	**X**

TABLE OF CONTENTS

VOLUME 1

TABLE OF CONTENTS (Continued)

LIST OF TABLES

LIST OF FIGURES

LIST OF EXHIBITS

VOLUME 2

Published Separately –

Flood Insurance Rate Map Index
Flood Insurance Rate Map

FLOOD INSURANCE STUDY

FAIRFIELD COUNTY, OHIO AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and supersedes the FIS reports and/or Flood Insurance Rate Maps (FIRMs), in the geographic area of Fairfield County, Ohio, including the Cities of Lancaster and Pickerington, the Villages of Amanda, Baltimore, Bremen, Buckeye Lake, Carroll, Lithopolis, Millersport, Pleasantville, Rushville, Stoutsville, Sugar Grove, Tarlton, Thurston, and West Rushville and the unincorporated areas of Fairfield County (hereinafter referred to collectively as Fairfield County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. There are no special flood hazard areas in the Villages of Amanda, Lithopolis, Pleasantville, Rushville, Stoutsville, and West Rushville. The Cities of Columbus and Reynoldsburg and the Villages of Buckeye Lake, Canal Winchester and Tarlton are multi-county communities shared between Fairfield, Franklin, Licking and Pickaway Counties. The City of Columbus and the Village of Canal Winchester are mapped entirely in Franklin County. The City of Reynoldsburg is mapped in both Franklin and Licking Counties, and the Village of Tarlton is mapped in both Pickaway and Fairfield Counties. The Village of Buckeye Lake is mapped in both in Fairfield and Licking Counties. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates. This information will also be used by Fairfield County to update existing floodplain regulations as part of the regular phase of the National Flood Insurance Program (NFIP), and by local and regional planners to further promote sound landuse and floodplain development. Minimum floodplain management requirements for participation in the NFIP are set forth in the code of Federal Regulations at 44 CFR, 60.3.

The Digital Flood Insurance Rate Map (DFIRM) and FIS Report for this countywide study have been produced in digital format. Flood hazard information was converted to meet Federal Emergency Management Agency (FEMA) DFIRM database Specifications and Geographic Information System (GIS) format requirements. The flood hazard information was created and is provided in digital format so that it can be incorporated into a local GIS and be accessed more easily by the community.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the State (or other jurisdictional agency) will be able to explain them.

1.2 Authority and Acknowledgements

The source of authority for this FIS is the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

Information on the authority and acknowledgments for each of the previously printed FISs and FIRMs for communities within Fairfield County was compiled, and is shown below.

Pre-Countywide

Village of Bremen. For the December 15, 1990 FIS report (Reference 1) the hydrologic and hydraulic analyses for this study were performed under the directives of the Federal Emergency Management Agency for the Village of Bremen, Ohio. Hydrologic and hydraulic analyses were obtained from the Soil Conservation Service Flood Hazard Analysis completed in September 1980 (Reference 2).

Fairfield County, Unincorporated Areas. For the original, April 17, 1989, FIS (Reference 3) the hydrologic and hydraulic analyses for the Hocking River, Pleasant Run, Fetters Run, Ewing Run, Blue Valley Lateral, Pleasant Run Lateral, Ewing Run Lateral, and Hocking River Diversion were obtained from Flood Hazard Analysis Report, Hocking River, Fairfield County, Ohio (Reference 4). Hydrologic and hydraulic analyses for the upper portion of the Hocking River, Hunters Run, Ohio Canal, Lateral A, Lateral B, Lateral C, and Lateral D were obtained from Food Hazard Analyses Report, Upper Hocking River, Fairfield County, Ohio (Reference 5). Hydrologic and hydraulic analyses for Rush Creek, Tributary A, Tributary B, Turkey Run, Raccoon Run, Tributary I, Little Rush Creek, and Tributary H were obtained from Flood Hazard Study, Rush Creek, Fairfield, Hocking, and Perry Counties, Ohio (Reference 6). Hydrologic and hydraulic analyses for Walnut Creek, Poplar Creek, Pawpaw Creek, Pawpaw Creek Tributary, Baltimore Tributary, and Little Walnut Creek were obtained from Flood Plain Management Study, Walnut Creek, Fairfield County, Ohio (Reference 7). The hydrologic and hydraulic analyses for the South Fork Licking River were obtained from the FIS for the Unincorporated Areas of Licking County (Reference 8). Flood Hazard Analyses Report, Blacklick Creek, Ohio and Flood Plain Information Study, Sycamore Creek, Fairfield County, Ohio were also used (References 9 and 10).

For the April 17, 1996 revision (Reference 11), the hydrologic and hydraulic analyses were obtained from Flood Hazard Study, Rush Creek, Fairfield, Hocking, and Perry Counties, Ohio (Reference 6).

City of Lancaster. For the April 17, 1989 FIS (Reference 12) report the hydrologic and hydraulic analyses for Raccoon Run were obtained from the April 17, 1989 FIS report for Fairfield County, Ohio (Reference 3).

The hydrologic and hydraulic analyses for the remaining streams studied were performed by U.S. Soil Conservation Service (SCS) (the Study Contractor) for the Federal Emergency Management Agency (FEMA, under Inter-Agency Agreement No. EMW-86-E-2225. This study was completed in August 1987.

City of Pickerington.

For the August 5, 1991 FIS Report (Reference 13) the hydrologic and hydraulic analyses for Blacklick Creek, Sycamore Creek, and Sycamore Creek Overflow were performed by the U.S. Geological Survey (USGS) for the FEMA, under

Inter-Agency Agreement No. EMW-88-E-2738, Project Order No. 1. That study was completed in August 1989.

For the September 19, 2007 (Reference 14) revised FIS report the hydrologic and hydraulic analyses for Georges Creek and Georges Creek Overflow were performed by Evans, Mechwart, Hambleton, and Tilton Incorporated (EHM&T), for FEMA. This work was completed in November 2002.

Village of Sugar Grove.

For the March 2, 1982 FIS report (Reference 15), the hydraulic and hydrologic analyses for this study were performed under the directive of the Federal Emergency Management Agency for the Village of Sugar Grove, Ohio. Hydrology and hydraulic analyses were obtained from the Soil Conservation Service "Flood Hazard Analysis Study" completed in April 1977 (Reference 16).

Countywide

Redelineation of previously effective flood hazard information for this FIS report and accompanying FIRMs as well as conversion of the unincorporated and incorporated areas of Fairfield County into countywide format was performed by Stantec Consulting Services, Inc. (Stantec) for FEMA under Contract No. HSFE05-05-D-0026, Task Order No. HSFE05-07-J-0026. This work was completed on January 6, 2012.

For this countywide FIS, a study performed by Stantec of Buckeye Lake was incorporated as a detailed study. This work was completed in 2001 for the Ohio Department of Natural Resources (ODNR).

The hydrologic and hydraulic analyses for Clark Run, and Rush Creek from approximately 1.2 miles upstream of Jerusalem Road to the Fairfield / Perry County boundary, were performed by the NRCS and USGS for FEMA as part of a Limited Map Maintenance program. This study was completed in May 2005.

The hydrologic and hydraulic analyses for Claypool Run, Crumley Creek, Greenfield Creek, Greenfield Creek Escape, Hocking River upstream of Sugar Grove Road, Hunters Run, Ohio Canal, Stonewall Creek, and Wilson Creek were performed by the USGS for FEMA as part of a Limited Map Maintenance program. This study was completed in May 2005.

The hydrologic and hydraulic analyses for Sycamore Creek from its confluence with Walnut Creek to approximately 730 feet upstream of Hill Road, and from Reynoldsburg – Baltimore Road to the Fairfield / Licking County boundary, Unnamed Tributary to Sycamore Creek, and Willow Run were performed by the NRCS for ODNR. This study was completed in 1997.

An update to the hydrologic and hydraulic analyses for Clark Run, Claypool Run, Crumley Creek, Greenfield Creek, Greenfield Creek Escape, Hocking River upstream of Sugar Grove Road, Hunters Run, Ohio Canal, Rush Creek from approximately 1.2 miles upstream of Jerusalem Road to the Fairfield / Perry County boundary, Stonewall Creek, and Wilson Creek, were performed by Stantec for FEMA under Contract No. HSFE05-05-D-0026, Task Order No. HSFE05-07-J-0026. This work was completed January 6, 2012.

The digital base mapping information was provided by the Ohio Department of Natural Resources (ODNR). Further information about the base mapping is available by contacting ODNR. These files were complied by photogrammetric methods and meet or exceed National Map Accuracy Standards.

Orthophotography was provided as a part of the Ohio Statewide Imagery Program (OSIP) at a 2.5 foot pixel resolution. Topographic information was provided in Light Detection and Ranging (LiDAR) mass points based on a 2006 flight. The LiDAR data has sufficient vertical accuracy to support the generation of 5 foot contours.

The projection used for the production of this FIRM is Ohio State Plane South Zone 5001 (FIPSZONE 3402). The horizontal datum was NAD83. Differences in the datum, spheroid, projection or state plane zones used in the production of FIRMs in adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

1.3 Coordination

The purpose of an initial Consultation Coordination Officer's (CCO's) meeting is to discuss the scope of the FIS. A final CCO meeting is held to review the results of the study. The dates of the initial and final CCO meetings held for prior FISs for the incorporated communities within Fairfield County are shown in Table 1.

Table 1. CCO Meeting Dates for Prior FISs

Community Name	Initial CCO Date	Final CCO Date
Village of Bremen	December 1978	September 14, 1981
Fairfield County (Unincorporated Areas)	*	May 10, 1995
City of Lancaster	June 26, 1986	May 4, 1988
Village of Pickerington	May 18, 1990	June 21, 2006
Village of Sugar Grove	December 1978	September 9, 1981

* Not available

For this FIS, an initial CCO meeting was held on June 20, 2007. The meeting was attended by representatives from Fairfield County, the Cities of Lancaster, Pickerington, and Reynoldsburg, the Villages of Baltimore, Canal Winchester, and Millersport, the Ohio Department of Natural Resources (ODNR), FEMA and FMSM. The final CCO meeting was held on March 24, 2010. The meeting was attended by representatives from Fairfield County, the Cities of Lancaster, and Pickerington, the Villages of Baltimore, Bremen, Lithopolis, and Millersport, the Ohio Department of Natural Resources (ODNR), and Stantec.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Fairfield County, Ohio, including the incorporated communities listed in Section 1.1 and unincorporated areas.

Approximate methods of analysis were used to study those areas having a low development potential or minimal flood hazards as identified at the initiation of the study. The scope and methods of study were proposed to and agreed upon by FEMA and Fairfield County officials.

For this FIS, the fifteen new detailed studies that were incorporated are shown in Table 2.

Table 2. Limits of New Detailed Studies

Flooding Source	Limits of Detailed Study
Clark Run	From its confluence with Rush Creek to the Fairfield / Perry County boundary
Claypool Run	From its confluence with the Ohio Canal to approximately 175 feet downstream of Brook Road
Crumley Creek	From its confluence with Hunters Run to approximately 825 feet upstream of its confluence of Hunters Run
Georges Creek	From approximately 350 downstream of Long Road to approximately 100 feet upstream of Pickerington Ridge Drive
Greenfield Creek	From its confluence with the Ohio Canal to NRCS Structure R-63
Greenfield Creek Escape	From its confluence with Claypool Run to its divergence from Greenfield Creek
Greenfield Creek Split	From its divergence with Greenfield Creek to its confluence with Greenfield Creek
Hocking River	From Sugar Grove Road to NRCS Structure No. 9
Hunters Run	From its confluence with the Hocking River to approximately 225 feet downstream of Mt. Zion Road
Ohio Canal	From its confluence with the Hocking River to its confluence with Ohio Canal Lateral A
Rush Creek	From approximately 1.2 miles upstream of Jerusalem Road to the Fairfield / Perry County boundary
Stonewall Creek	From its confluence with Hunter Run to NRCS Structure No. 4

Table 2. Limits of New Detailed Studies (Cont.)

Flooding Source	Limits of Detailed Study
Sycamore Creek	From its confluence with Walnut Creek to approximately 730 feet upstream of Hill Road, and from Reynoldsburg – Baltimore Road to the Fairfield / Licking County boundary.
Unnamed Tributary to Sycamore Creek	From its confluence with Sycamore Creek to approximately 2,275 feet upstream of Doty Road
Willow Run	From its confluence with Sycamore Creek to approximately 200 feet downstream of Refugee Road
Wilson Creek	From its confluence with Hocking River to approximately 175 feet downstream of Mt. Zion Road

Those streams studied previously by detailed methods were re-delineated using information from previous FIS reports from Fairfield County, Ohio. Those streams studied previously by detailed methods are shown in Table 3. Limits of Detailed Studies are indicated on the Flood Profiles (Exhibit 1) and on the FIRM (published separately).

Table 3. Limits of Detailed Studies (From Prior FIS Reports)

Flooding Source	Limits of Detailed Study
Baldwin Run	From its confluence with the Hocking River to its confluence with Fetters Run and Ewing Creek
Baltimore Tributary	From its Confluence with Paw Paw Creek to Roley Road
Blacklick Creek	From approximately 0.95 miles upstream of Refugee Road to I-70 West
Blue Valley Lateral	From its confluence with the Hocking River to approximately 0.75 miles downstream of McGrery Road
Ewing Run	From its confluence with Fetters Run to approximately 2,400 feet upstream of Rainbow Drive
Fetters Run	From its confluence with Ewing Run to approximately 0.56 miles downstream of Coonpath Road
Georges Creek	From approximately 350 feet down stream of Long Road to approximately Pickerington Ridge Drive.
Georges Creek Overflow	From its divergence from Georges Creek to approximately 2,900 feet down stream.
Hocking River	From the Fairfield / Hocking County boundary to Sugar Grove Road

Table 3. Limits of Detailed Studies (From Prior FIS Reports) (Cont.)

Flooding Source	Limits of Detailed Study
Hocking River Diversion	From its divergence from the Hocking River to its confluence with the Hocking River
Hocking River Lateral A	From its confluence with the Hocking River to approximately 600 feet upstream of Hawthorne Ave
Hocking River Lateral B	From its confluence with the Hocking River to approximately 1,500 feet upstream of Hoffman Drive
Hocking River Lateral D	From its confluence with the Hocking River to Lancaster-Circleville Road
Little Rush Creek	From its confluence with Rush Creek to NRCS Structure No. VI-A
Little Walnut Creek	From its confluence with Walnut Creek to Richland Road
Ohio Canal Lateral A	From its confluence with the Ohio Canal to approximately 100 feet upstream of Farm Lane
Pawpaw Creek	From its confluence with Walnut Creek to approximately 750 feet downstream of Kumler Road
Pawpaw Creek Tributary	From its confluence with Pawpaw Creek to Cherry Lane
Pleasant Run	From its confluence with the Hocking River to approximately 300 feet upstream of Lancaster-Thornville Road
Pleasant Run Lateral	From its confluence with Pleasant Run to approximately 275 feet upstream of Duffy Road
Poplar Creek	From its confluence with Walnut Creek to Blacklick-Eastern Road
Raccoon Run	From its confluence with Rush Creek to Lancaster-New Lexington Road
Rush Creek	From its confluence with the Hocking River to the Fairfield / Hocking county boundary, and Fairfield / Hocking County boundary to approximately 1.2 miles upstream of Jerusalem Road
South Fork Licking River	From Walnut Road to Walnut Road
Sycamore Creek	From approximately 730 feet upstream of Hill Road to Reynoldsburg – Baltimore Road
Sycamore Creek Overflow	From its divergence from Sycamore Creek to its confluence with Sycamore Creek
Tarhe Run	From its confluence with the Hocking River to approximately 1,250 feet downstream of Mill Road
Tributary A	From its confluence with Rush Creek to approximately 1,625 feet upstream of Carpenter Road

Table 3. Limits of Detailed Studies (From Prior FIS Reports) (Cont.)

Flooding Source	Limits of Detailed Study
Tributary B	From its confluence with Rush Creek to approximately 225 feet upstream of Paradise Road
Tributary H	From its confluence with Little Rush Creek to Lake Road
Tributary I	From its confluence with Raccoon Run to Lancaster-New Lexington Road
Turkey Run	From its confluence with Rush Creek to approximately 575 feet downstream of Fairfield / Perry County boundary
Walnut Creek	From the Fairfield / Franklin County boundary to approximately 1,700 feet upstream of Baltimore-Somerset Road

The areas studied by detailed methods in previous FIS reports were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction.

Approximate analyses were used to study those areas having a low development potential or minimal flood hazards, as shown in Table 4. The scope and methods of study were proposed to and agreed upon by FEMA and ODNR.

Table 4. Streams Studied by Approximate Methods

Blue Valley Lateral	Paw Paw Creek Tributary 1
Beals Run	Pleasant Run Lateral
Bush Ditch	Racoon Run
Clear Creek	South Fork Georges Creek
Dunkle Run	South Fork Licking River Tributary 3
Hock River Tributary 5	Tarhe Run
Lateral A	Walnut Creek
Lateral H	Walnut Creek Tributary 19
Little Walnut Creek	

Streams previously mapped as Zone A were replaced by new approximate studies. Large lakes and areas of ponding that are currently mapped as Zone A were digitally converted with consideration given to the topography.

This countywide FIS also incorporated the determination of letters issued by FEMA resulting in map revisions (LOMR) and map amendments (LOMA), as

shown in Table 5. LOMAs incorporated for this study are summarized in the Summary of Map Actions (SOMA) included in the Technical Support Data Notebook (TSDN) associated with this FIS update. Copies of the TSDN may be obtained from the Community Map Repository.

Table 5. Incorporated Letters of Map Change

Community	Case Number	Flooding Source(s) and Project Identifier	Date Issued	Type
Lancaster, City of	07-05-1581P	Hocking River Lateral D	August 2, 2007	LOMR
Fairfield County Unincorporated Areas	96-05-123P	Ohio Canal Lateral C	April 30, 1996	102-I-A
Fairfield County Unincorporated Areas	06-05-BA30P	Hocking River	January 25, 2007	LOMR
Fairfield County Unincorporated Areas	04-05-A672P	Ohio Canal Lateral A	March 17, 2005	LOMR

2.2 Community Description

Fairfield County is in central Ohio, and is bordered on the north by Franklin and Licking Counties, the City of Reynoldsburg, and the Village of Buckeye Lake; on the east by Perry County; on the south by Pickaway and Hocking Counties; and on the west by Pickaway and Franklin Counties, the City of Columbus, and the Village of Canal Winchester. The City of Lancaster, located approximately 30 miles southeast of Columbus, Ohio, is the county seat. U.S. Routes 22 and 33 are the major roads serving the county. Conrail and CSX Transportation also operate within the county. According to the US Census Bureau, the 2008 population estimate of Fairfield County is 142,223 (Reference 17).

The study area is almost entirely within the Allegheny Plateau. The rock units present are primarily sandstone and shale, with a regional dip of 20 to 30 feet per mile to the southeast. All of the geologic formations present are of the Mississippian era. The oldest is the Cuyahoga formation, consisting of fine-grained sandstone and siltstone with thin beds of shale. It occurs throughout the northern half of the area and is exposed in the Hocking Valley. The Black Hand formation is a coarse-grained sandstone and conglomerate member that occurs within the Upper Cuyahoga formation. It is resistant to erosion and forms steep slopes in the area. The youngest formation present is the Logan formation, a fine-grained sandstone that is present only on the ridge tops in the southern and eastern portions of the county.

After deposition, periods of uplift, slight deformation, erosion, and glaciation occurred. During the Pleistocene epoch, deposits of glacial till, sand, and outwash were laid down by the retreating Illinoisan glacier. Thick deposits of till and outwash were also left behind as the second glacial formation, the Wisconsin glacier, melted and retreated northward. Since glacial times, the drainage in the area has occupied preglacial channels as deposited alluvium in the low-lying areas of the floodplain. The SCS published a soil survey of Fairfield County that delineates and describes the soils in the county (Reference 18).

The climate of both the Hocking and Upper Hocking watersheds is classified as humid with warm summers and mildly cold winters typical of the northern temperate zone. Precipitation is distributed quite evenly throughout the year. The mean annual precipitation in the area is 40.75 inches (Reference 19).

The streams studied are mainly formed in alluvium material with the extreme upper ends of some of the laterals formed in till. The stream channel side slopes of the Hocking River consist of alluvium and are quite unstable; usually some sloughing or erosion damage occurs during sustained periods of full bank flow. The side laterals entering the Hocking River downstream of Lancaster are steep and produce high peak flows.

The highest elevation in the watershed is approximately 1,189.6 feet North American Vertical Datum 1988 (NAVD88) in the northwestern portion of the watershed in Bloom Township, with the lowest point being approximately 824.6 feet NAVD88 at the point where Hunters Run leaves the watershed. This is approximately 365 feet of relief in the watershed.

The watershed's bedrock consists of coarse sandstone and conglomerate, covered by glacial till and outwash gravels deposited during the last glacial age. The soils occurring on the uplands are primarily light-colored Alexandria, Cardington, and Bennington silt loams. They are already level to sloping, moderately productive soils with slow infiltration and rapid runoff rates.

In the study area, the lower reaches of the Hocking River and Hunters Run have very broad, nearly level floodplains adjacent to nearly level glacial outwash terraces. These low-lying areas are subject to frequency flood damage.

The Rush Creek watershed is in southeastern Fairfield County, southwestern Perry County, and a small portion of northern Hocking County. The topography of the watershed is moderately steep in the southern and eastern portions to rolling in the western and northern portions. Elevations range from approximately 769.4 feet NAVD88 at the mouth of Rush Creek at the Hocking River, to approximately 1,139.6 feet NAVD88 along the southeastern watershed divide. Soils that dominate the higher elevations along the eastern and southern perimeter and the central portion of the watershed were formed in siltstone, shale, or sandstone. Soils on the floodplains along the major streams were formed in water-deposited sediments. Most of the soils on the floodplain and terraces are fertile and are well suited for farming.

The floodplain soils along Walnut Creek are mostly light-colored silt loam and loam soils formed in alluvial deposits. They include somewhat poorly drained Shoals, moderately well-drained Eel, and well-drained Genesee series. Dark

colored, poorly drained Sloan and Montgomery soils occur in the low-lying areas of the floodplain. Most floodplain soils in the watershed are well suited for agriculture.

The Village of Amanda is located in southwestern Fairfield County in central southeastern Ohio approximately 26 miles east-southeast of Columbus, Ohio. Amanda is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 710 (Reference 17).

The Village of Baltimore is located in northern Fairfield County in central southeastern Ohio approximately 22 miles east of Columbus, Ohio. Baltimore is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 2,905 (Reference 17).

The Village of Bremen is located in the southeastern portion of Fairfield County in central Ohio. Bremen is surrounded on all sides by unincorporated Fairfield County. The village is six miles east of the City of Lancaster and about 35 miles southeast of the City of Columbus, Ohio. According to the US Census Bureau, the 2007 population estimate of the Village of Bremen is 1,246 (Reference 20).

The climate of the area is moist temperate with an average annual temperature of 53 degrees Fahrenheit. The average annual precipitation is 41.4 inches. The maximum precipitation occurs from March through August with the highest rainfall occurring in March and June.

The topography of the area is moderately steep in the southern and eastern portions to rolling in the western and northern portions. Elevations range from approximately 769.4 feet NAVD88 at the mouth of Rush Creek at the Hocking River, to approximately 1,139.6 feet NAVD88 along the southeastern watershed divide. Soils that dominate the higher elevations along the eastern and southern perimeter and the central portion of the watershed were formed in Illinoisan-Aged till, or they are residual soils formed in generally acid siltstone, shale or sandstone. Soils on the flood plains along the major streams were formed in water-deposited sediments. Most of the soils of the flood plain and terraces are fertile and well suited for farming.

The Village of Buckeye Lake is located in northern Fairfield County and Southern Licking County in central southeastern Ohio approximately 30 miles east of Columbus, Ohio. Buckeye Lake is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2009 was 3,083 (Reference 17).

The Village of Carroll is located in northern Fairfield County in central southeastern Ohio approximately 19 miles east-southeast of Columbus, Ohio. Carroll is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 467 (Reference 17).

The Village of Lithopolis is located in southwestern Fairfield County in central southeastern Ohio approximately 14 miles east-southeast of Columbus, Ohio. Lithopolis is bordered by Columbus to the west, Canal Winchester to the north and by the unincorporated areas of Fairfield County to the south and east. The estimated population of the Village in 2008 was 1,070 (Reference 17).

The City of Lancaster is in central Fairfield County in central Ohio, about 30 miles southeast of the City of Columbus, Ohio, and is surrounded by the unincorporated areas of the county. Lancaster is served by U.S. Routes 33 and 22; State Routes 37, 158, 188, and 793; the CSX railroad; and Conrail. According to the US Census Bureau, the 2007 population estimate of the City of Lancaster is 36,950 (Reference 20).

The highest elevation in the study area is about 1,099.4 feet NAVD88 at Mt. Pleasant in Rising Park. The lowest point is about 799.4 feet NAVD88 where the Hocking River leaves the area. There is about 300 feet of relief within the watershed. The topography is rolling because the area is located on end moraines of the glaciated Allegheny Plateau. This is a transition area between the flat glacial till plains to the northwest and the hilly, unglaciated Allegheny Plateau to the southeast. The soils on the uplands are primarily light-colored Alexandria and Cardington silt loams that have formed in glacial till. The soils on the flat, relatively wide bottomlands around Pleasant, Ewing, and Fetters Runs and the Hocking River consist of mixtures of soils that have formed on glacial lake deposited clays, glacial outwash gravels, and recent alluvial silts. Typical soils in these areas are the Montgomery, Fox, and Eel series (Reference 18). The bedrock in the study area consists of sandstone and conglomerate that is almost completely covered by glacial materials left during the retreat of the last glacier.

Lancaster is in the northern temperate zone. The climate is humid with warm summers and mildly cold winters and precipitation is distributed quite evenly throughout the year. The mean annual precipitation in the area is 40.75 inches (Reference 21), more than 2 inches greater than the mean for the entire state and more than 7 inches greater than the mean for the flat, northwestern part of the state.

The Village of Millersport is located in northern Fairfield County in central southeastern Ohio approximately 24 miles east of Columbus, Ohio. Millersport is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 927 (Reference 17).

The City of Pickerington is located just southeast of the City of Columbus, located in northwestern Fairfield County, Ohio, with a portion of the city within adjacent Franklin County, Ohio. The city is served by U.S. Interstate 70, State Highways 204 and 256, and a railroad. According to the US Census Bureau, the 2007 population estimate of the City of Pickerington is 17,215 (Reference 20).

The Village of Pleasantville is located in northeastern Fairfield County in central southeastern Ohio approximately 26 miles east-southeast of Columbus, Ohio. Pleastantville is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 853 (Reference 17).

The Village of Rushville is located in eastern Fairfield County in central southeastern Ohio approximately 32 miles east-southeast of Columbus, Ohio. Rushville is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 262 (Reference 17).

The Village of Stoutsville is located in southwestern Fairfield County in central southeastern Ohio approximately 26 miles south of Columbus, Ohio. Stoutsville

is bordered on the west by the unincorporated areas of Pickaway County, and in the north, east and south by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 572 (Reference 17).

The Village of Sugar Grove is located in southern Fairfield County. Completely surrounded by unincorporated Fairfield County, the village is 10 miles south of the City of Lancaster. The Chessie System and U.S. Highway 33 serve as major routes of transportation for the village. According to the US Census Bureau, the 2007 population estimate of the Village of Sugar Grove is 445 (Reference 20).

The Rush Creek Watershed climate is moist temperate with an average annual temperature of 53 degrees Fahrenheit. The average annual precipitation is 41.4 inches. The maximum precipitation occurs from March to August with the highest rainfall occurring in March and June.

The topography of the watershed is moderately steep in the south and east to rolling in the west and north. Elevations range from 7769.4 feet NAVD88 at the mouth of Rush Creek at the Hocking River, to approximately 1,139.6 feet NAVD88 along the southeastern watershed divide.

Soils that dominate the higher elevations along the eastern and southern perimeter and the central portion of the watershed were formed in Illinoian-Aged till; or they are residential soils formed in generally acid siltstone, shale or sandstone. Soils on the flood plains along the major streams were formed in water-deposited sediments; most, are fertile and well suited for farming.

The Rush Creek Watershed comprises 236.7 square miles and is located in southeastern Fairfield County, southwestern Perry County and a small portion of northern Hocking County. In 1978, the SCS completed and published an environmental impact statement for the watershed (Reference 22). This reference should be consulted for a detailed description and environmental assessment of the study area.

The Village of Thurston is located in northern Fairfield County in central southeastern Ohio approximately 24 miles east-southeast of Columbus, Ohio. Thurston is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 602 (Reference 17).

The Village of West Rushville is located in eastern Fairfield County in central southeastern Ohio approximately 31 miles east-southeast of Columbus, Ohio. West Rushville is surrounded by the unincorporated areas of Fairfield County. The estimated population of the Village in 2008 was 137 (Reference 17).

2.3 Principal Flood Problems

The most frequent flooding occurs in Fairfield County during the winter and early spring.

Areas downstream of Lancaster that flood most frequently are at Horns Mill and an area near the junction of Old Logan and Tarklin Roads.

In the Hocking River watershed, flooding equivalent to the 10-percent-annual-chance storm occurred on March 4, 1963, and May 27, 1968. The floods that

occurred on January 21, 1959; April 2, 1970; February 23, 1975; and July 23, 1976, are comparable to the two-year recurrence interval. The storm on June 19, 1978, passed to the north around most of the watershed. The rain that fell in the watershed caused considerable flooding along the Ohio Canal at Hooker. Flooding in this area was comparable to the 1-percent-annual-chance storm. Flooding from the above storms caused damage to agricultural fields, roads, and lawns.

Flooding has historically been a major water resource problem in the Rush Creek watershed. Periodic flooding damages crops, pastures, urban areas, and transportation systems. Floods causing serious, widespread damage have occurred in March 1907, March 1913, August 1935, January 1937, April 1940, June 1950, March 1963, and March 1964. In recent years, major floods of somewhat lesser magnitude were experienced in June 1958, January 1959, May 1961, and February 1975.

The storms of March 1963 and March 1964 resulted in the highest stages ever recorded in the Bremen area. The magnitude of the March 1963 flood in terms of precipitation was equivalent to the 3.33-percent-annual-chance storm; however, the discharges approached the equivalent of a 1-percent-annual-chance storm. Damage in Bremen in 1963 was estimated at $500,000. Approximately 170 head of livestock drowned on farms located south of town. In addition, it was estimated that damages to roads, railroads, and bridges amounted to $120,000.

Flood damage within the Walnut Creek watershed has primarily been to crops. The average annual flood damage for this area is estimated to be $75,000. Streambank erosion is occurring along some areas of Walnut Creek and its tributaries. Log jams and fallen trees in the channel have contributed to this problem by diverting flood flow toward the streambanks and undercutting the bank slopes.

Village of Bremen

Flooding has historically been a major water resource problem in the Rush Creek Watershed. Periodic flooding damages crops, pastures, urban areas and transportation systems. Floods causing serious widespread damage have occurred in March 1907, March 1913, August 1935, January 1937, April 1940, June 1950 and March 1963 and 1964. In recent years, major floods of somewhat lesser magnitude have been experienced in June 1958, January 1959, May 1961 and February 1975.

The storms of March 1963 and 1964 resulted in the highest stages ever recorded in the Village of Bremen area. The magnitude of the 1963 flood in terms of precipitation was equivalent to the 3.33-percent-annual-chance storm; however, the discharges approached the equivalent of a 1-percent-annual-chance storm. Damages in Bremen in 1963 were estimated at $500,000. About 170 head of livestock drowned in farms located south of the village. In addition, it was estimated that damages to roads, railroads and bridges amounted to $120,000.

Numerous residences and commercial and industrial establishments in the Village of Bremen are susceptible to flooding. The area north and east of the Conrail tracks is subject to direct flooding from Little Rush Creek. Although

some of those waters overflow into the rest of the village, most of the flooding results from Rush Creek.

City of Lancaster

The most severe flood known to have occurred in Lancaster was on the night of July 21, 1948. Approximately 8 to 10 inches of rain fell in the Upper Hocking River and North Hocking River watersheds. Over 200 residences and businesses were flooded and the resulting damage totaled over $1,000,000. The U.S. Geological Survey (USGS) determined the discharge at the mouth of Hunters Run, with a drainage area of 10 square miles, to be 11,200 cubic feet per second (cfs), an extremely high discharge for such a small drainage area.

Flooding also occurred on January 1, 1959; March 5, 1963; May 28, 1968; April 2, 1970; and February 24, 1975 (Reference 4). Estimates of the frequency of these floods are not available. Flooding in Lancaster frequently occurs in the George Street and Mulberry Street areas, in the Maple Street area adjacent to the river, and along Sugar Grove Road.

During the evening of July 21, 1976, approximately 0.7 to 1.0 inch of rain fell along Pleasant Run upstream of Main Street on U.S. Route 22. On July 22, 1976, another 3.0 to 3.1 inches of rain fell in that drainage area, which is the amount equivalent to approximately an l-year storm. Amounts of rain falling over the Hocking River watershed varied considerably. Water flowed over Main Street on the morning of July 23, 1976.

The most recent flooding occurred in Lancaster from June 13 to 14, 1981. An intense thunderstorm centered over the Baldwin Run watershed resulted in extensive flooding. Several stores in the shopping center along East Main Street were heavily damaged. It was an approximately 4-percent-annual-chance flood in that portion of the watershed.

City of Pickerington

The streams studied in detail are part of the Walnut Creek watershed. The land use for the Walnut Creek Watershed is predominately agricultural; however significant suburban residential development has taken place in recent years. The most frequent flooding occurs during the winter and early spring. Flood damage within the Walnut Creek watershed has primarily been to crops (Reference 23).

Village of Sugar Grove

Historically, flooding has been a major water resource problem in the Rush Creek Watershed. Periodic flooding damages crops, pastures, urban areas and transportation systems. Floods causing serious widespread damage have occurred in March 1907, March 1913, August 1935, January 1937, April 1940, June 1950, March 1963 and March 1964. In recent years, major floods of somewhat lesser magnitude have been experienced in June 1958, January 1959, May 1961 and February 1975.

2.4 Flood Protection Measures

Fairfield County, Unincorporated Areas

The Hocking River watershed has benefitted from the Upper Hocking (Pilot) Watershed Project. Construction started in 1954 on the watershed project and was completed in 1961. Eight flood-retarding structures were installed, controlling 24.4 square miles of drainage area and providing 6,245 acre-feet of temporary flood storage.

Since the installation of the reservoirs, downstream flood peaks have been reduced and are rather uniform due to the temporary flood storage provided.

In 1957, application was made for assistance under the Watershed Protection and Flood Prevention Act (Public law 566) for the Rush Creek watershed work plan. Developed by the U.S. Department of Agriculture, the plan provided for the installation of 22 reservoirs, 23 miles of channel improvement, and 1.9 miles of levees. 19 flood-retarding reservoirs have been constructed, controlling 85 square miles of drainage area. In addition, the channel improvement work on Rush Creek has been completed.

The 1.9 miles of levees on Raccoon Run and Little Rush Creek around Bremen are designed as earthen levees providing 100-year protection, with three feet of freeboard, for the Village of Bremen. The channel improvements and levee on Raccoon Run were completed in 1987. The levee on Rush Creek has been completed. FEMA specifies that all levees must have a minimum of 3-foot freeboard against 100-year flooding to be considered a safe flood protection structure. Both the Raccoon Run and Little Rush Creek levees meet FEMA's freeboard requirements. The depth and extent of flooding has been, and will continue to be, reduced by the installation of these flood protection measures.

No flood protection measures exist within the Walnut Creek watershed.

A watershed plan has been developed by the South Fork Licking River Watershed Conservancy District with the assistance of the SCS (Reference 24). Installation of the planned project will reduce flood elevations on the South Fork Licking River. This project will include six flood-retarding dams along with a series of channel modifications when completed.

The Fairfield County Commissioners adopted subdivision regulations in 1973 to prevent inordinate development in the floodplains of the county. The Fairfield County Regional Planning Commission approved and adopted the same measures. Revised subdivision regulations have since been prepared for Fairfield County. The design and requirements of the Fairfield County Subdivision Regulations contain specific requirements relative to "Land Subject to Flooding" (Reference 25).

Village of Bremen

In 1957, application was made for assistance under the Watershed Protection and Flood Prevention Act (Public Law 566). A watershed mark plan was developed by the U.S. Department of Agriculture providing for the installation of 22 reservoirs, 23 miles of channel improvements and 1.9 miles of levee. To date

(December 15, 1990), 14 flood retarding reservoirs have been constructed with the remainder of structural measures planned for construction. The depth and extent of flooding has been, and will continue to be, reduced by the installation of these measures.

City of Lancaster

In 1956, two streamflow measuring gages were established in the watershed by the USGS, one on Hunters Run and one on the Hocking River. About the same time, construction of the Upper Hocking (Pilot) Watershed Project started (Reference 26). Installation of the gages and construction of the floodwater prevention structures took place primarily because of the damage suffered in the 1948 flood. The watershed project was completed in 1961. Eight floodwater-retarding structures were installed that controlled 24.4 square miles of drainage area and provided 6,245 acre-feet of temporary flood storage (Reference 26). Since the installation of the reservoirs, downstream flood peaks have, been rather uniform because of the temporary flood storage provided. Several years ago, many of the streams in Lancaster were cleaned and the spoil piled on the banks. The spoil prevents flooding from many of the more frequent storms. However, the reliability of these spoil-pile dikes is questionable.

In addition, a plan for urban flood protection for the City of Lancaster (Reference 27) has been approved for implementation. The plan includes the construction of dikes, a floodwater-retarding dam on Tarhe Run, and a flood warning system. None of the measures have been installed and were not considered in the preparation of this study.

City of Pickerington

Flood protection measures are not known to exist within the study area.

Village of Sugar Grove

In 1957, application was made for assistance under the Watershed Protection and Flood Prevention Act (Public Law 566). A watershed work plan was developed by the U.S. Department of Agriculture providing for the installation of 22 reservoirs, 23 miles of channel improvement and 1.9 miles of levee. To date (March 2, 1982), 14 flood-retarding reservoirs have been constructed with the remainder of structural measures planned for construction. The depth and extent of flooding has been, and will continue to be, reduced by the installation of these measures.

3.0 ENGINEERING METHODS

For the flooding sources studied by detailed methods within the County, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once on the average during any 10-, 50-, 100- or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100- or 500-year floods, have a 10, 2, 1 and 0.2 percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at short

intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 1-percent-annual-chance flood in any 50-year period is approximately 40 percent (4 in 10), and for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community.

This FIS report includes information from previously published FIS reports where streams were studied in detail. It also includes new information for streams studied by approximate methods and information from the NRCS, and USGS studies that were incorporated as part of the countywide FIS.

Detailed Studies

Peak discharges for the 10-, 2-, 1-, and 0.2-percent-annual-chance floods of each flooding source studied in detail in previous FIS reports and in the NRCS, and USGS studies are shown in Table 6.

Pre-Countywide

Flood discharges for Baltimore Tributary, Blue Valley Lateral, Fetters Run from approximately 700 feet upstream of Lancaster - Newark Road to approximately 3,300 feet upstream of Rainbow Drive, Hocking River from the Hocking County boundary to approximately 300 feet downstream of Sugar Grove Road, Hocking River Diversion, Hocking River Lateral D from approximately 2,000 feet down stream of Wilson Road to Wilson Road and from approximately 750 feet upstream of Mill Park Road to approximately 2,500 feet upstream of Mill Park Road, Little Rush Creek, Little Walnut Creek, Ohio Canal Lateral A, Pawpaw Creek, Pawpaw Creek Tributary, Pleasant Run from its confluence at the Hocking River to approximately 1,800 feet upstream of Duffy Road and from Marrietta Road to Lancaster - Thornville Road, Pleasant Run Lateral, Poplar Creek, Raccoon Creek from its confluence with Rush Creek to Schwilk Road, Rush Creek from its confluence with the Hocking River to the Hocking County Boundary, and from the Hocking County Boundary to approximately 4,400 feet downstream of the Perry County Boundary, Tributaries A, B, H and I, Turkey Run and Walnut Creek were established by valley and structure flood routings computed using the SCS computer program TR-20 (Reference 28). This program uses the convex method for stream flow and valley flood routing. Input parameters include drainage area, land use, surface slope, and rainfall. The stream discharges of some streams decreased at certain downstream areas because of overbank storage effects. Floodwaters are detained in these overbank storage areas during peak flow conditions, thus causing lower peak stream discharges.

The Hocking River watershed was analyzed using the Hocking River Valley and Structure Flood Routing Model. A hydro graph was computed at the Broad Street Bridge over the Hocking River in the City of Lancaster. This hydrograph was derived from stage-storage and reach routing calculations using routing coefficients determined by stream and valley geometry.

The model was calibrated against two storm events with uniform rainfall distributions that occurred on February 22-23, 1975, and on July 22-23, 1976. The calculated discharges from the model matched the gage information very closely. In addition, spot elevation checks made along Pleasant Run Tributary were found to match calculated elevations closely.

The Hocking River watershed hydrologic model was compared to the U.S. Geological Survey (USGS) stream gage on Hunters Run (No. 03156000) located at the U.S. Route 22 Bridge and the City of Lancaster corporate limits. The flows obtained from the TR-20 analysis matched the gage analysis given in the Ohio Department of Natural Resources (ODNR) Bulletin 45 (Reference 29). The flow values obtained from regression equations in Bulletin 45 were found to be higher than the flow values obtained from TR-20. This was expected because the regression equations do not account for the effect of the flood-retarding structures.

The validity of the Rush Creek watershed computer model was verified during two earlier SCS studies, "Final Environmental Impact Statement, Rush Creek Watershed," and "Work Plan, Rush Creek Watershed" (References 30 and 31).

The Walnut Creek watershed model was calibrated to match the discharges at the downstream county boundary for the FIS for Franklin County and Incorporated Areas (Reference 32).

Flood discharges for Baldwin Run, Ewing Run, Fetters Run from its confluence with Ewing Run to approximately 700 feet upstream of Lancaster - Newark Road, Hocking River Lateral A, Hocking River Lateral B, Hocking River Lateral D from it’s confluence with the Hocking River to approximately 2,000 feet down stream of Wilson Road and from Wilson Road to approximately 750 feet upstream of Mill Park Road, Pleasant Run from approximately 1,800 feet upstream of Duffy Road to Marrietta Road, Raccoon Creek from Schwilk Road to Lancaster – New Lexington Road, and Tarhe Run were established by valley and structure flood routings completed using the TR-20 computer program (Reference 28). The convex method in this program is used for stream valley flood routing. Rainfall data to establish frequency was obtained from Technical Paper No. 40 (Reference 33).

The discharge values obtained from TR-20 were compared to stream gage records on Hunters Run and the Hocking River and to discharge values calculated by regression equations (Reference 29). Differences in the values were attributed to the implementation of the Upper Hocking Watershed Project (Reference 26) and urban development.

Flood discharges for Blacklick Creek were obtained from the Soil Conservation Service (SCS) (Reference 9). The peak discharge was also computed using

Bulletin No. 45 (Reference 29). The peak discharge estimates were adjusted for urbanization using USGS procedures (Pickerington Reference 34).

Georges Creek, Georges Creek Overflow were determined using the Natural Resource Conservation Services' (NCRS) TR-20 hydrologic computer program (Reference 28). Flood discharges computed by the TR-20 model are based on average runoff conditions for the rainfall depth-duration data presented in U.S. Weather Bureau publication Technical Paper No. 40 (TP-40) (Reference 33). The 24-hour rainfall totals were distributed following the NRCS Type II storm.

Sycamore Creek from approximately 650 feet upstream of Hill Road to Reynoldsburg-Baltimore Road, and Sycamore Creek Overflow were determined using Bulletin No. 45 (Reference 29).

Flood discharges for the South Fork Licking River, were taken from a TR-20 computer model (Reference 28), developed by the SCS Service in (Reference 35).

The South Fork Licking River TR-20 model discharge values were compared to and found to be somewhat lower than those obtained by the ODNR Bulletin 45 analysis (Reference 29). Due to the shape of the watershed and the width and flatness of the floodplain, lower discharge values could be expected. The TR-20 model was verified through calibration with a historical storm.

Countywide

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for the flooding sources studied in detail affecting the county.

Peak discharges for the 10, 2-, 1-, and 0.2-percent-annual-chance storm event were determined at various locations throughout Sycamore Creek, Unnamed Tributary, and Willow Run were established by valley and structure flood routings computed using the SCS TR-20 watershed model (Sugar Grove Reference 28), which uses the convex method for stream and valley flood routing. Input data included runoff curve numbers, drainage areas, time of concentration, stream reach lengths and elevation-discharge data from the water-surface profile analysis.

Peak discharges for the 1-percent-annual-chance storm event were determined at various locations throughout Rush Creek and Clark Run using the NRCS WinTR-20 version 1.00. The original model was created by the NRCS in 2004 with rainfall depths taken from the National Weather Service (NWS) Technical Paper 40 (TP – 40) Type II 24-hr storm charts. Since the TP-40 charts do not include the 0.2-percent-annual-chance event in order to stay consistent with the original model, a 0.2-percent-annual-chance rainfall depth was derived by extrapolating the semi-log plot curve of the TP-40 Frequency vs. Rainfall depth.

Peak discharges for the 10-, 2-, 1-, and 0.2-percent-annual-chance storm event were determined at various ungaged locations throughout Claypools Run, Crumley Creek, Greenfield Creek, Hocking River from approximately 300 feet downstream of Sugar Grove Road to NRCS structure number 9, Huters Run, the Ohio Canal. Stonewall Creek and Wilson Creek using regression equations presented in the USGS – Techniques for Estimating Flood-Peak Discharges for

Rural, Unregulated Streams in Ohio, 2003 (WRIR03-4164) (Reference 36). For reaches within the Hocking River basin there were two USGS gageing stations, Hocking River at Lancaster (USGS No. 03156400) and Hunters Run at Lancaster (USGS No. 03156000) where historic stream flow data was available. Estimates for 10, 2-, and 1-percent-annual-chance storm events were determined for the gage stations by performing LPIII regression.

Table 6. Summary of Discharges

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs)			
		10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Baldwin Run					
At mouth	13.1	4,400	6,300	7,300	9,100
Baltimore Tributary					
At confluence with Pawpaw Creek	6.7	1,270	1,890	2,730	3,490
Blacklick Creek					
Approximately 9,000 feet downstream of Tussing Road	50.6	N/A	N/A	10,900	N/A
Blue Valley Lateral					
At confluence with Hocking River	6.6	1,184	1,866	2,251	3,036
Clark Run					
At mouth	12.9	N/A	N/A	1,205	1,500
Claypools Run					
At mouth	5.9	953	1470	1,690	2,220
Approximately 570 feet downstream of Havensport Road	4.6	849	1320	1,530	2,020
Crumley Creek					
At mouth	1.9	471	610	678	802
Greenfield Creek					
At mouth	3.2	412	551	584	665
Just upstream of Election House Road	2.1	304	408	433	495
Just upstream of Rainbow Drive	0.9	159	214	227	259
Greenfield Creek Escape					
At mouth	N/A	158	297	330	411
Greenfield Creek Split Flow					
At mouth	N/A	134	238	263	325
Ewing Run					
At mouth	5.2	2,300	3,200	3,700	4,700
Just upstream of Tiki Lane Road	3.7	2,100	2,900	3,400	4,200
Fetters Run					
At mouth	7.1	2,100	3,100	3,600	4,500
Just upstream of Fair Avenue	6.5	2,100	3,000	3,400	4,300
Just upstream of Granville Pike	5.1	1,800	2,600	3,000	3,800

Table 6. Summary of Discharges (Cont.)

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs)			
		10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Georges Creek					
Approximately 350 feet downstream of Long Road	4.4	901	1,272	1,374	1,836
Georges Creek Overflow					
Just downstream of divergence from Georges Creek	0.9	N/A	N/A	567	N/A
Hunters Run					
At Mouth	11.7	1,750	2,220	2,450	2,880
Just upstream of Stonewall Creek	7.2	1,250	1,590	1,760	2,070
Approximately 2900 feet downstream of US Route 33	4.8	936	1,200	1,330	1,560
Just upstream of Crumley Creek	2.4	554	714	793	936
Just upstream of Lancaster-Circleville Road	1.4	382	494	550	650
Hocking River					
At downstream county boundary	338.2	10,394	15,207	17,912	23,605
Just downstream of confluence of Pleasant Run	85.5	8,069	10,658	11,958	14,746
At U.S. Route 33	N/A	5,588	7,638	8,700	10,889
Just downstream of Sugar Grove Road	64.7	3,760	4,880	5,130	5,770
Just upstream of confluence of Baldwin Run	51.9	3,170	4,120	4,330	4,870
Just upstream of confluence of Tarhe Run	48.7	3,000	3,900	4,100	4,610
Just upstream of confluence of Hunters Run	36.3	2,440	3,190	3,360	3,780
Just upstream of confluence with Hocking River Lateral B	30	2,150	2,810	2,960	3,340
Just upstream of confluence with Ohio Canal and Hocking River Lateral D	12	1,060	1,400	1,480	1,670
Just upstream of confluence with Wilson Creek	7.5	731	964	1,020	1,150
Hocking River Diversion					
Just upstream of confluence with Hocking River	N/A	2,700	4,024	4,768	6,300
Lateral A					
At mouth	2.5	610	900	1,100	1,400
At confluence with Ohio Canal	1.6	390	580	680	900
Lateral B					
At confluence with Ohio Canal	5.6	870	1,100	1,200	1,300

Table 6. Summary of Discharges (Cont.)

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs)			
		10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
At mouth	1.7	470	610	690	860
Lateral C					
At confluence with Ohio Canal	3.0	730	990	1,100	1,400
Lateral D					
At confluence with Hocking River	3.0	1,100	1,500	1,700	2,200
Little Rush Creek					
At mouth	N/A	3,550	5,460	5,850	8,250
At confluence with Rush Creek	60.9	3,110	4,810	5,130	7,310
Little Walnut Creek					
At confluence with Walnut Creek	10.9	2,360	3,420	4,820	6,150
Ohio Canal					
At mouth	13	1,180	1,434	1,454	1,554
Just upstream of Greenfield Creek	9	915	1,084	1,084	1,084
Approximately 410 feet upstream of Collins Road	N/A	915	1,220	1,290	1,520
Pawpaw Creek					
At confluence with Walnut Creek	16.2	2,830	4,150	5,950	7,590
Pawpaw Creek Tributary					
At confluence with Pawpaw Creek	3.95	620	890	1,270	1,590
Pleasant Run					
At confluence with Hocking River	17.1	2,551	3,520	4,087	5,446
Just upstream of Main Street	9.1	1,700	2,300	2,600	3,300
Pleasant Run Lateral					
At confluence with Pleasant Run	3.28	919	1,291	1,516	1,932
Poplar Creek					
At confluence with Walnut Creek	17.5	2,840	4,250	6,150	7,870
Raccoon Run					
At confluence with Rush Creek	29.1	1,430	1,900	2,030	2,920
Rush Creek					
At confluence with Hocking River	236.7	5,640	N/A	9,440	N/A
At Marietta Road	N/A	5,220	7,310	7,710	10,990
At confluence of Little Rush Creek	159.6	3,190	4,080	4,230	5,820
Approximately 4980 feet	91.5	N/A	N/A	5440	7120

Table 6. Summary of Discharges (Cont.)

Flooding Source and Location	Drainage Area (square miles)	Peak Discharges (cfs) 10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
upstream of Jerusalem Road					
South Fork Licking River					
Approximately 4,300 feet upstream of CONRAIL	18	1,990	3,100	3,640	4,970
Stonewall Creek					
At mouth	1.6	254	343	364	417
Approximately 1450 feet upstream of Cincinnati-Zanesville Road	1.4	236	319	340	389
Sycamore Creek					
Approximately 2,300 feet downstream of Hill Road South	20.7	N/A	N/A	5,060	N/A
Approximately 500 feet downstream of Hill Road South	17.6	N/A	N/A	4,490	N/A
Sycamore Creek Overflow					
Just downstream of divergence from Sycamore Creek	N/A	N/A	N/A	933	N/A
Tarhe Run					
At mouth	3.1	1,200	1,800	2,100	2,700
Just upstream of Broad Street	1.9	760	1,100	1,300	1,600
Tributary A					
At confluence with Rush Creek	3.5	1,040	1,740	1,880	2,690
Tributary B					
At confluence with Rush Creek	1.8	540	910	980	1,410
Tributary H					
At confluence with Little Rush Creek	13.6	N/A	N/A	3,480	N/A
Tributary I					
At confluence with Raccoon Run	1.7	350	590	640	930
Turkey Run					
At mouth	11.0	1,850	3,010	3,260	4,780
Walnut Creek					
At downstream county boundary	146.2	11,330	15,770	23,390	30,980
Downstream of confluence of Little Walnut Creek	39.9	4,800	6,810	9,730	12,230
Wilson Creek					
At Mouth	2.8	417	564	599	687
Approximately 1590 feet upstream of Wilson Road	2.2	366	500	533	614

* Data not available

A summary of stillwater elevations is shown in Table 7.

Table 7. Summary of Stillwater Elevations

Flooding Source and Location	Elevation (Feet NAVD)			
	10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Buckeye Lake, Fairfield County, Ohio	892.1	892.6	892.8	893.2

Approximate Studies

Peak discharges for the 1-percent-annual-chance (100-year) storm event were determined at various locations throughout each of the approximate study reaches in Fairfield County. Hydrologic calculations were performed using regression equations presented in SIR 2006-5312 (Reference 37). The regression equations were developed using generalized least-squares (GLS) regression analyses on data from 305 gaging stations. The equations were developed to estimate flood discharges on unregulated streams based on the total-contributing drainage area, channel slope determined from the 10-85 method, percentage of drainage area as open water and wetlands, and hydrologic regional factors. Additional information about the model development is contained in Techniques for Estimating Flood Peak Discharges of Rural, Unregulated Streams in Ohio by G.F. Koltun, 2003, USGS Water Resources Investigations Report (WRIR) 03-4164 (Reference 36). Peak discharges were adjusted when needed to account for the influence of existing stream gages and dams on the approximate study reach.

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of the floods of the selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data table in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS report in conjunction with the data shown on the FIRM.

The hydraulic analyses for this study are based only on unobstructed flow. The flood elevations shown on the Flood Profiles are, thus, considered valid only if hydraulic structures remain unobstructed, operate properly and do not fail.

Changes in existing bridge dimensions and elevations could also affect the given water surface elevations (WSELs).

This FIS report includes information from previously published FIS reports where streams were studied in detail. It also includes new information for streams studied by approximate methods and information from the SCS, ODNR, and USGS studies that were incorporated as part of the countywide FIS.

Detailed Studies

Pre-Countywide

Cross-section data in some areas of the City of Lancaster were obtained from topographic data supplied by Kosanchick and Associates, Inc., and SEICO, Inc. (References 38 and 39).

Cross-section data for Blacklick Creek, Georges Creek, Georges Creek Overflow, Sycamore Creek, and Sycamore Creek Overflow were obtained by field surveys and synthesized using topographic maps that were obtained photogrammetrically from aerial photographs (Reference 40).

All other cross sections and structural geometry were obtained by field surveys.

Water-surface elevations for the selected recurrence intervals for Baltimore Tributary, Blue Valley Lateral, Fetters Run from approximately 700 feet upstream of Lancaster - Newark Road to approximately 3,300 feet upstream of Rainbow Drive, Hocking River from the Hocking County boundary to approximately 300 feet downstream of Sugar Grove Road, Hocking River Diversion, Hocking River Lateral D from approximately 2,000 feet down stream of Wilson Road to Wilson Road and from approximately 750 feet upstream of Mill Park Road to approximately 2,500 feet upstream of Mill Park Road, Little Rush Creek, Little Walnut Creek, Ohio Canal Lateral A, Pawpaw Creek, Pawpaw Creek Tributary, Pleasant Run from its confluence at the Hocking River to approximately 1,800 feet upstream of Duffy Road and from Marrietta Road to Lancaster - Thornville Road, Pleasant Run Lateral, Poplar Creek, Raccoon Creek from its confluence with Rush Creek to Schwilk Road, Rush Creek from its confluence with the Hocking River to the Hocking County Boundary, and from the Hocking County Boundary to approximately 4,400 feet downstream of the Perry County Boundary, Tributaries A, B, H and I, Turkey Run and Walnut Creek were computed through the use of the SCS WSP-2 step-backwater computer program (Reference 41). Bridge head losses were calculated using methods from "Hydraulics of Bridge Waterways" (Reference 42).

Water-surface elevations for the selected recurrence intervals for Baldwin Run, Ewing Run, Fetters Run from its confluence with Ewing Run to approximately 700 feet upstream of Lancaster - Newark Road, Hocking River Lateral A, Hocking River Lateral B, Hocking River Lateral D from it’s confluence with the Hocking River to approximately 2,000 feet down stream of Wilson Road and from Wilson Road to approximately 750 feet upstream of Mill Park Road, Pleasant Run from approximately 1,800 feet upstream of Duffy Road to Marrietta Road, Raccoon Creek from Schwilk Road to Lancaster – New Lexington Road, and Tarhe Run were computed using the WSP-2 computer program (Reference

41). The floodways were determined using the TR-64 computer program (Reference 43).

Water-surface elevations for the selected recurrence intervals for Blacklick Creek, Sycamore Creek, and Sycamore Creek Overflow were computed using the step backwater analysis program WSPRO (Reference 44).

From the hydraulic analysis of the 1-percent-annual-chance flooding for Sycamore Creek, it was determined that approximately 22 percent of the flow escapes the confines of the main channel just upstream of the Conrail bridge creating an overflow channel. The flow in the overflow channel follows a path roughly parallel to the railroad tracks to the northwest of the Conrail bridge. The overflow rejoins the main channel through a culvert beneath the railroad embankment and as flow over the railroad embankment. The culvert is located approximately 2,500 feet northwest along the railroad from the Conrail bridge and the low point in the railroad is approximately 900 feet northwest of the culvert.

Water-surface elevations for the selected recurrence intervals for Georges Creek , and Georges Creek Overflow were computed using the U.S. Army Corps of Engineers' (USACE) Hydraulic Engineering Center River Analysis System (HEC-RAS) computer program (Reference 45). The HEC-2 data used in the previous study was imported into HEC-RAS. Additional cross sections were added to the model to incorporate previously unstudied driveway culverts upstream of Long Road and at other location to refine the modeling as necessary. The limit of detailed study for Georges Creek was also extended to approximately 2,600 feet upstream of the Fairfield/Franklin County line. The information used to extend the study was obtained from field survey of the channel and aerial photogrammetry in the overbanks. Field reconnaissance was performed to verify the dimensions of the culverts, bridges and Manning's "n" values along Georges Creek. A separate HEC-RAS model was created to establish a flood profile for the overflow from Georges Creek to Blacklick Creek, which was labeled Georges Creek Overflow. This overflow occurs upstream of a railroad embankment, within Fairfield County. Water backs up at this location because of an undersized culvert, and escapes from Georges Creek to the west along the north side of the railroad embankment and eventually reaches Blacklick Creek. No floodway has been established in this area.

Starting water-surface elevations for Baltimore Tributary, Blue Valley Lateral, Fetters Run from approximately 700 feet upstream of Lancaster - Newark Road to approximately 3,300 feet upstream of Rainbow Drive, Hocking River from the Hocking County boundary to approximately 300 feet downstream of Sugar Grove Road, Hocking River Diversion, Hocking River Lateral D from approximately 2,000 feet down stream of Wilson Road to Wilson Road and from approximately 750 feet upstream of Mill Park Road to approximately 2,500 feet upstream of Mill Park Road, Little Rush Creek, Little Walnut Creek, Ohio Canal Lateral A, Pawpaw Creek, Pawpaw Creek Tributary, Pleasant Run from its confluence at the Hocking River to approximately 1,800 feet upstream of Duffy Road and from Marrietta Road to Lancaster - Thornville Road, Pleasant Run Lateral, Poplar Creek, Raccoon Creek from its confluence with Rush Creek to Schwilk Road, Rush Creek from its confluence with the Hocking River to the Hocking County Boundary, and from the Hocking County Boundary to

approximately 4,400 feet downstream of the Perry County Boundary, Tributaries A, B, H and I, and Turkey Run were calculated using normal-depth techniques.

For Walnut Creek, starting water-surface elevations were taken from the FIS for Franklin County and Incorporated Areas (Reference 32).

Starting water-surface elevations for Baldwin Run, Ewing Run, Fetters Run from its confluence with Ewing Run to approximately 700 feet upstream of Lancaster - Newark Road, Hocking River Lateral A, Hocking River Lateral B, Hocking River Lateral D from it's confluence with the Hocking River to approximately 2,000 feet down stream of Wilson Road and from Wilson Road to approximately 750 feet upstream of Mill Park Road, Pleasant Run from approximately 1,800 feet upstream of Duffy Road to Marrietta Road, Raccoon Creek from Schwilk Road to Lancaster – New Lexington Road, and Tarhe Run were obtained by the slope-area method.

Starting water-surface elevations for Blacklick Creek were obtained from the SCS (Reference 9). Starting WSELs for Sycamore Creek were determined by the slope-conveyance method. Starting WSELs for Georges Creek and Georges Creek Overflow were determined by using known water surface elevations.

Countywide

Cross-section data for Clark Run, Claypools Run, Crumley Creek, Greenfield Creek, Hocking River from approximately 300 feet downstream of Sugar Grove Road to NRCS structure number 9, Huters Run, the Ohio Canal, Rush Creek, Stonewall Creek, Sycamore Creek, Unnamed Tributary, Willow Run and Wilson Creek were obtained by field surveys.

Water-surface elevations for the selected recurrence intervals for the reaches described above were computed using the USACE HEC-RAS computer program (Version 3.1.3).

Starting water-surface elevations for Hocking River from approximately 300 feet downstream of Sugar Grove Road to NRCS structure number 9 were obtained from the April 17, 1989, Fairfield County unincorporated FIS (Reference 3).

Starting water-surface elevations for Clark Run, Claypools Run, Crumley Creek, Greenfield Creek, Huters Run, the Ohio Canal, Rush Creek, Stonewall Creek, Sycamore Creek, Unnamed Tributary, Willow Run and Wilson Creek were calculated using normal-depth techniques

Roughness factors (Manning's "n") used in the hydraulic computations were estimated from photographs and field reconnaissance of the study area. Roughness factors used in the detailed studies are summarized in Table 8.

Table 8. Manning's "N" Values

Stream	Channel "n"	Overbank "n"
Baldwin Run	0.025-0.075	0.03-0.2
Baltimore Tributary	0.039-0.050	0.060-0.100
Blacklick Creek	0.025-0.06	0.035-0.1

Table 8. Manning's "N" Values (Cont.)

Stream	Channel "n"	Overbank "n"
Blue Valley Lateral	0.050-0.072	0.055-0.090
Clark Run	0.036-0.046	0.032-0.068
Claypools Run	0.034-0.07	0.028-0.072
Crumley Creek	0.036-0.04	0.046
Ewing Run	0.025-0.075	0.03-0.2
Fetters Run	0.025-0.075	0.03-0.2
Georges Creek	0.012-0.05	0.03-0.07
Greenfield Creek	0.028-0.05	0.028-0.07
Greenfield Creek Escape	0.028-0.046	0.028-0.046
Greenfield Creek Split	0.038-0.046	0.038-0.07
Hocking River	0.025-0.074	0.055-0.150
Hocking River Diversion	0.065-0.080	0.065-0.080
Hocking River Lateral A	0.025-0.075	0.03-0.2
Hocking River Lateral B	0.025-0.075	0.03-0.2
Hocking River Lateral D	0.025-0.07	0.03-0.2
Hunters Run	0.036-0.048	0.028-0.072
Little Rush Creek	0.06	0.060-0.120
Little Walnut Creek	0.035-0.046	0.060-0.090
Ohio Canal	0.042-0.046	0.032-0.07
Ohio Canal Lateral A	0.035-0.090	0.080-0.200
Pawpaw Creek	0.045-0.049	0.075-0.100
Pawpaw Creek Tributary	0.05	0.08
Pleasant Run	0.025-0.095	0.03-0.2
Pleasant Run Lateral	0.032-0.100	0.065-0.070
Poplar Creek	0.041-0.046	0.072-0.092
Raccoon Run	0.046-0.062	0.075-0.080
Rush Creek	0.035-0.055	0.046-0.120
South Fork Licking River	0.030-0.070	0.072-0.120
Stonewall Creek	0.032-0.042	0.032-0.07
Sycamore Creek	0.03-0.065	0.03-0.13
Sycamore Creek Overflow	0.03-0.065	0.03-0.13
Tarhe Run	0.025-0.075	0.03-0.2
Tributary A	0.040-0.065	0.060-0.090
Tributary B	0.062-0.064	0.075-0.110
Tributary H	0.037-0.046	0.080-0.085
Tributary I	0.040-0.055	0.075-0.080
Turkey Run	0.042-0.046	0.080-0.090
Unnamed Tributary	0.05-0.055	0.08-0.13

Table 8. Manning's "N" Values (Cont.)

Stream	Channel "n"	Overbank "n"
Walnut Creek	0.037-0.046	0.060-0.095
Willow Run	0.03-0.069	0.03-0.13
Wilson Creek	0.032-0.042	0.032-0.07

Detail-studied streams that were not re-studied as part of this map update may include a "profile base line" on the maps, which provides a link to the flood profiles included in the Flood Insurance Study report. The detail-studied stream centerline may have been digitized or redelineated as part of this revision. The "profile base lines" for these streams were based on the best available data at the time of their study and are depicted as they were on the previous FIRMs. In some cases where improved topographic data was used to redelineate floodplain boundaries, the "profile base line" may deviate significantly from the channel centerline or may be outside the Special Flood Hazard Area (SFHA).

Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals.

Approximate Studies

Approximate hydraulic analyses were performed using the USACE HEC-RAS computer program (Version 3.1.3). A simplfied HEC-RAS hydraulic model was created, containing 17 study streams. These models contain unsurveyed cross sections placed with an average spacing of approximately 1000 ft, with a maximum spacing of 1700 ft. Cross section geometric data was extracted from a Triangulated Irregular Network (TIN) created from a Light Detection and Ranging (LIDAR) points that support 5 foot contours. The LIDAR was collected by the Ohio Statewide Imagery Program (OSIP) for Fairfield County in 2006.

Overbank Manning's 'n' values were estimated from a 2001 National Land Cover Dataset (NLCD) of Ohio prepared by United States Geological Survey (USGS). A field reconnaissance was not performed. Channel 'n' values were assumed to be 0.035. The overbank 'n' values were extracted to RAS directly from GIS using HECGeoRAS 4.1. Appendix B shows the Overbank Manning's 'n' values used for each corresponding land use. These values were taken from Chow (1959) and McCuen (1998).

The 1-percent-annual-chance flood discharges determined using the previously described hydrologic methods were used in the HEC-RAS models. Flow changes were entered at the upstream most reach of each stream and at each sub-watershed location throughout along the stream. Reach boundary conditions were selected in accordance with FEMA's

Guidelines and Specifications for Flood Hazard Mapping Partners (May 2005). The boundary conditions applied were either the known water surface elevation taken from existing detailed studies or the normal depth at the most downstream end of each stream. The results of the HEC-RAS simulations have been uploaded to the MIP.

The Zone A lakes in Fairfield County were not modeled using HEC-RAS. Instead, the lakes will be mapped to the 1-percent-annual-chance flood pool elevation based on data supplied by the USACE – Huntington District. Table 2.1 shows the elevations that will be used to map each lake.

3.3 Vertical Datum

All FIS reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground and structure elevations can be referenced and compared. Until recently, the standard vertical datum in use for newly created or revised FIS reports and FIRMs was the NGVD29. With the finalization of the NAVD88, many FIS reports and FIRMs are being prepared using NAVD88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD88. Structure and ground elevations in the community must, therefore, be referenced to NAVD88. It is important to note that adjacent communities may be referenced to NGVD29. This may result in differences in Base Flood Elevations (BFEs) across the corporate limits between communities. Effective information for this FIS was converted from NGVD29 to NAVD88. An average conversion of -0.6 feet (NGVD29 - 0.6 = NAVD88) was applied uniformly across the county to convert all effective BFEs and other profile elevations. The conversion factor was calculated using Corpscon (Reference 46) to obtain the conversion at the south east corner of each USGS 7.5 minute orthoquad within 2.5 miles of the county boundary, and an average conversion factor was determined. Table 9 contains the conversion factors for the orthoquads around Fairfield County.

Table 9. Vertical Datum Conversions
Single Conversion Factor (countywide) Method

Point ID #	Quadrangle Name	Corner	NAD83 Latitude (dec. deg.)	NAD83 Longitude (dec. deg.)	NGVD29 to NAVD88 Elevation Change (feet)
1	Lancaster	SE	39.625	-82.5	-0.581
2	Amanda	SE	39.625	-82.625	-0.512
3	East Ringgold	SE	39.625	-82.75	-0.492
4	Baltimore	SE	39.75	-82.5	-0.725
5	Carroll	SE	39.75	-82.625	-0.630
6	Canal Winchester	SE	39.75	-82.75	-0.531
7	Millersport	SE	39.875	-82.5	-0.663
8	Pataskala	SE	39.875	-82.625	-0.640
9	Reynoldsburg	SE	39.875	-82.75	-0.627
10	Bremen	SE	39.625	-82.375	-0.771
11	Ashville	SE	39.625	-82.875	-0.492
12	Rushville	SE	39.75	-82.375	-0.774
13	Lockbourne	SE	39.75	-82.875	-0.538

Range of conversion values	-0.774 through -0.492
Average conversion values	-0.614
Maximum variance from the average conversion	0.16
Maximum variance from a non-conversion value	0.774

For more information on NAVD88, see the FEMA publication entitled *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988* (FEMA, June 1992), or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Silver Spring, Maryland 20910. (Internet address http://www.ngs.noaa.gov.)

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the Technical Support Data Notebook (TSDN) associated with the FIS report and FIRM for this community. Interested individuals may contact FEMA to access these data.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages the State and local governments to adopt sound floodplain management programs. Therefore, each FIS provides 1-percent-annual-chance flood elevations and delineations of the 1- and 0.2-percent-annual-chance floodplain boundaries and 1-percent-annual-chance floodway to assist communities in developing floodplain management measures. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles and Floodway Data Tables. Users should reference the data presented in the FIS report as well as additional information that may be available at the local map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

In order to provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base for floodplain management purposes. The 0.2-percent-annual-chance floods are employed to indicate additional areas of flood risk in the community. For each stream studied by detailed methods, the 1- and 0.2-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross-section.

Between cross-sections for all studied streams the 1-percent-annual-chance floodplain boundaries were delineated using a Triangulated Irregular Network (TIN) created from LiDAR points that support 5-foot contours. The LiDAR was collected by OSIP for Fairfield County in 2006.

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM (published separately). On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A and AE). The 0.2-percent-annual-chance floodplain boundaries correspond to the boundary of the areas of moderate flood hazards (Zone X). In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown on the FIRM (published separately). Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

For the streams studied by approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM (published separately).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum standards of FEMA limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

Floodways for the new detailed studies found in Table 2 were calculated by Stantec for FEMA under Contract No. HSFE05-05-D-0026, Task Order No. HSFE05-07-J-0026 using equal conveyance reduction.

All other floodways presented in this FIS and on the FIRMs were directly obtained from the previous FIS reports in the Floodway Data Tables. They were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross-sections. Between cross-sections, the floodway boundaries were interpolated. The results of the floodway computations were tabulated at selected cross-sections in Table 10. In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown.

No floodways were computed for Georges Creek Overflow to Blacklick Creek in the northwest portion of the City of Pickerington, portions of Little Rush Creek, Raccoon Run, Rush Creek, Sycamore Creek Overflow, Tributaries A, B, H, and I, and Turkey Run..

The area between the floodway and the 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water surface elevation of the 1-percent-annual-chance flood more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.

The floodways in this report are recommended to local agencies as minimum standards that can be adopted or used as a basis for additional studies.

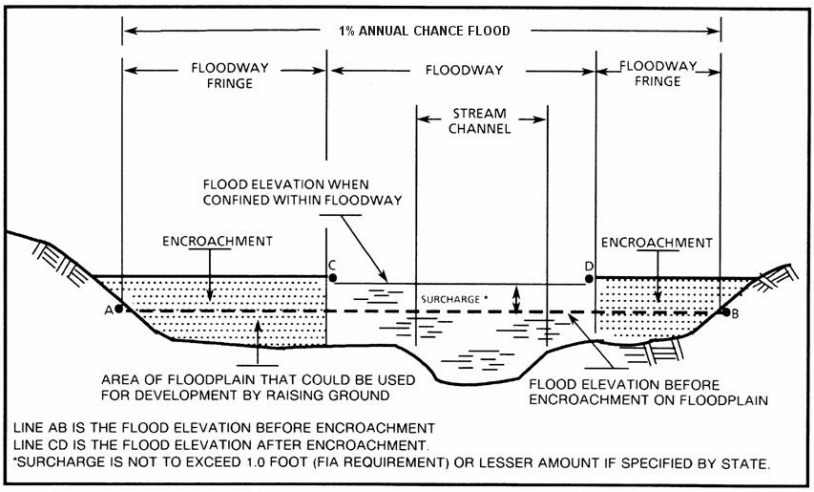


Figure 1. Floodway Schematic

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Baldwin Run								
A	1,100[1]	95	976	7.4	813.2	813.2	814.2	1.0
B	2,250[1]	412	2,271	3.2	816.4	816.4	817.4	1.0
C	3,230[1]	101	1,169	6.2	821.0	821.0	822.0	1.0
D	4,155[1]	145	1,199	6.1	821.5	821.5	822.5	1.0
Baltimore Tributary								
A	600[2]	80	564	4.8	848.7	848.7	849.7	1.0
B	1,160[2]	79	719	3.8	849.3	849.3	850.3	1.0
C	1,740[2]	687	4,075	0.7	851.4	851.4	852.4	1.0
D	5,890[2]	100	516	5.3	862.9	862.9	863.9	1.0
E	7,240[2]	61	398	6.9	868.0	868.0	869.0	1.0
Blacklick Creek								
A	47,500[3]	455	2,233	4.90	804.0	804.0	804.3	0.3
B	50,985[3]	480	2,167	4.90	814.4	814.4	815.0	0.6
C	55,430[3]	480	3,013	3.50	825.6	825.6	825.8	0.2
D	56,630[3]	480	1,828	5.50	827.9	827.9	828.3	0.4
Blue Valley Lateral								
A	500[4]	273	1,065	2.1	773.0	773.0	773.5	0.5
B	4,250[4]	335	1,092	2.1	782.4	782.4	782.9	0.5
C	6,180[4]	210	812	3.2	787.4	787.4	787.9	0.5
D	10,380[4]	336	624	2.8	797.0	797.0	797.5	0.5

[1]Feet above Mouth [2]Feet above Confluence with PawPaw Creek [3]Feet above Confluence with Big Walnut Creek [4]Feet above Confluence with Hocking River

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Baldwin Run, Baltimore Tributary, Blacklick Creek, Blue Valley Lateral

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Clark Run								
A	336[1]	44	234	5.14	796.9	796.9	796.9	0.0
Claypools Run								
A	161[2]	500	1,318	1.3	838.3	837.2 [3]	838.1 [3]	0.9
B	1,020[2]	199	643	2.6	838.3	838.0 [3]	839.0 [3]	1.0
C	1,532[2]	60	229	7.4	839.3	839.3	839.9	0.6
D	1,737[2]	60	325	5.2	840.7	840.7	841.2	0.5
E	2,235[2]	48	294	5.7	841.4	841.4	842.3	0.9
F	2,782[2]	76	714	2.4	846.8	846.8	847.6	0.8
G	3,310[2]	133	1,023	1.7	846.9	846.9	847.7	0.8
H	5,141[2]	259	1,591	1.1	847.2	847.2	848.1	0.8
I	5,734[2]	175	895	1.9	847.3	847.3	848.1	0.8
J	5,827[2]	164	848	2.0	848.3	848.3	849.0	0.6
K	6,593[2]	162	668	2.5	848.7	848.7	849.2	0.6
L	7,707[2]	115	433	3.9	850.5	850.5	851.1	0.6
M	8,707[2]	129	641	2.6	855.0	855.0	855.8	0.7
N	9,916[2]	110	498	3.4	855.6	855.6	856.4	0.9
O	11,124[2]	115	561	3.0	858.2	858.2	859.0	0.8
P	12,552[2]	66	277	5.5	861.9	861.9	862.8	0.9
Q	13,769[2]	156	349	4.4	867.5	867.5	868.1	0.6
R	14,931[2]	50	222	6.9	871.3	871.3	871.7	0.4
S	15,881[2]	83	249	6.2	876.4	876.4	876.7	0.4
T	16,915[2]	89	330	4.6	883.1	883.1	883.9	0.8
U	17,907[2]	116	464	3.3	890.9	890.9	890.9	0.0
V	18,945[2]	99	220	7.0	898.9	898.9	899.3	0.4

[1]Feet above Mouth [2]Feet above confluence with Hocking River [3]Elevations Without Considering Backwater Effects From the Ohio Canal

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Clark Run, Claypools Run

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Claypools Run (Cont)								
W	19,799[1]	60	261	5.9	906.0	906.0	906.6	0.5
X	20,207[1]	50	241	6.3	909.2	909.2	909.4	0.3
Crumley Creek								
A	84[2]	27	85	8.0	905.3	905.3	905.3	0.0
B	417[2]	22	77	8.8	909.6	909.6	909.7	0.0
C	823[2]	28	101	6.7	914.1	914.1	914.2	0.1
Ewing Run								
A	1,691[3]	84	514	7.3	827.1	827.1	828.1	1.0
B	3,231[3]	87	641	5.8	834.6	834.6	835.6	1.0
C	4,991[3]	45	317	11.8	842.5	842.5	843.5	1.0
D	6,491[3]	111	617	6.1	849.3	849.3	850.3	1.0
E	8,341[3]	125	741	5.1	856.5	856.5	857.5	1.0
F	10,251[3]	73	478	7.1	868.6	868.6	869.6	1.0
G	11,281[3]	95	722	4.7	872.2	872.2	873.2	1.0
H	12,401[3]	78	537	6.3	876.6	876.6	877.6	1.0
I	14,401[3]	87	501	6.8	889.4	889.4	890.4	1.0
J	16,161[3]	109	894	2.20	904.3	904.3	905.3	1.0
K	17,761[3]	66	242	8.0	911.1	911.1	912.1	1.0

[1]Feet above confluence with Hocking River [2]Feet above Mouth [3]Feet above Confluence with Fetters Run

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Claypools Run, Crumley Creek, Ewing Run

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Fetters Run								
A	1,005[1]	211	950	3.8	823.7	823.7	824.7	1.0
B	1,990[1]	74	501	7.1	827.0	827.0	828.0	1.0
C	2,620[1]	85	525	6.8	828.5	828.5	829.5	1.0
D	3,460[1]	56	462	7.4	831.3	831.3	832.3	1.0
E	4,460[1]	126	621	5.5	834.4	834.4	835.4	1.0
F	5,390[1]	70	465	7.3	839.3	839.3	840.3	1.0
G	6,620[1]	49	397	8.6	848.0	848.0	849.0	1.0
H	8,020[1]	82	520	6.6	854.5	854.5	855.5	1.0
I	8,605[1]	57	441	7.8	856.1	856.1	857.1	1.0
J	9,040[1]	78	516	6.6	859.3	859.3	860.3	1.0
K	9,800[1]	148	751	4.5	863.0	863.0	864.0	1.0
L	10,840[1]	52	375	9.1	867.5	867.5	868.5	1.0
M	12,090[1]	65	503	5.9	873.9	873.9	874.9	1.0
N	13,170[1]	91	567	5.3	878.0	878.0	878.5	0.5
O	15,160[1]	66	317	6.1	887.9	887.9	888.4	0.5
P	16,410[1]	44	262	7.4	896.4	896.4	896.9	0.5
Q	18,110[1]	75	393	4.9	906.2	906.2	906.7	0.5
Georges Creek								
A	35,909[2]	174	344	1.9	793.0	793.0	793.3	0.3
B	37,754[2]	24	102	6.6	798.9	798.9	798.9	0.0
C	38,936[2]	26	105	3.4	803.3	803.3	803.5	0.2
D	39,892[2]	91	135	2.6	806.7	806.7	806.9	0.2
E	40,480[2]	66	121	7.6	808.8	808.8	809.0	0.2

[1]Feet above Mouth [2]Feet above Confluence with Little Walnut Creek

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Fetters Run, Georges Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Georges Creek Overflow								
A	4,000[1]	N/A[3]	N/A[3]	N/A[3]	802.7	N/A[3]	N/A[3]	N/A[3]
B	4,950[1]	N/A[3]	N/A[3]	N/A[3]	804.2	N/A[3]	N/A[3]	N/A[3]
C	5,830[1]	N/A[3]	N/A[3]	N/A[3]	806.5	N/A[3]	N/A[3]	N/A[3]
Greenfield Creek								
A	784[2]	26	91	2.80	831.8	831.8	831.8	0.1
B	2,142[2]	22	85	3.00	834.3	834.3	835.1	0.8
C	2,696[2]	21	76	3.34	835.8	835.8	836.3	0.5
D	4,377[2]	25	61	4.16	839.9	839.9	840.1	0.2
E	5,639[2]	24	74	3.45	844.3	844.3	844.3	0.0
F	6,424[2]	23	68	3.74	846.2	846.2	846.3	0.0
G	7,867[2]	28	131	1.95	853.8	853.8	853.8	0.0
H	9,629[2]	22	107	5.47	859.2	859.2	859.4	0.3
I	11,215[2]	82	417	1.0	865.8	865.8	866.8	0.9
J	13,347[2]	23	44	3.8	871.4	871.4	871.4	0.0
K	14,615[2]	23	84	5.2	879.4	879.4	879.7	0.3
L	14,705[2]	75	143	3.0	880.0	880.0	880.6	0.6
M	15,069[2]	61	306	0.7	886.1	886.1	887.1	1.0
N	16,190[2]	111	335	0.7	893.1	893.1	894.1	1.0
O	17,123[2]	21	55	4.2	897.7	897.7	897.7	0.0

[1]Feet above Convergence with Blacklick Creek [2]Feet above Confluence with Ohio Canal [3]No data available

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Georges Creek Overflow, Greenfield Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Greenfield Creek Escape								
A	205[1]	20	50	6.6	842.1	842.1	842.2	0.2
B	486[1]	20	51	6.4	844.1	844.1	844.3	0.2
C	1,009[1]	71	187	1.8	848.3	848.3	849.2	1.0
D	1,400[1]	27	108	3.1	849.0	849.0	850.0	0.9
E	1,527[1]	75	199	1.7	849.7	849.7	850.6	0.9
F	2,366[1]	155	465	0.7	849.9	849.9	850.8	0.9
G	3,313[1]	167	545	0.6	849.9	849.9	850.9	1.0
H	4,514[1]	73	277	1.2	850.1	850.1	851.0	0.9
I	5,450[1]	34	98	3.4	851.5	851.5	852.0	0.6
Greenfield Creek Split								
A	305[2]	196	492	0.5	865.9	865.9	866.8	0.9
B	436[2]	64	206	1.3	865.9	865.9	866.8	0.9
C	658[2]	73	138	1.9	866.2	866.2	866.9	0.7
D	939[2]	127	179	1.5	866.8	866.8	867.2	0.4
E	1,419[2]	288	257	1.0	867.0	867.0	867.6	0.6
F	1,614[2]	310	345	0.8	867.3	867.3	867.8	0.5
G	1,880[2]	253	100	2.6	870.7	870.7	870.8	0.1
H	2,063[2]	158	123	2.1	872.5	872.5	872.6	0.1

[1]Feet Above Confluence with Claypools Run [2]Feet above Confluence with Greenfield Creek [3]Feet Above Hocking County Boundary

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Greenfield Creek Escape, Greenfield Creek Split

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Hocking River								
A	2,000	1,416	10,852	1.6	764.4	764.4	764.9	0.5
B	5,600	1,163	8,895	2.0	766.3	766.3	766.8	0.5
C	8,580	730	6,890	1.8	770.6	770.6	770.6	0.0
D	11,060	300	6,445	1.6	771.7	771.7	771.7	0.0
E	16,110	697	4,054	3.3	778.8	778.8	779.3	0.5
F	24,290	1,180	5,720	3.9	787.9	787.9	788.3	0.4
G	26,700	290	1,726	7.7	791.3	791.3	791.7	0.4
H	27,600	570	3,446	3.4	793.3	793.3	793.7	0.4
I	32,200	550	3,100	4.4	798.9	798.9	799.3	0.4
J	34,450	912	5,288	2.1	800.7	800.7	801.2	0.5
K	38,850	1,024	5,529	2.0	804.1	804.1	804.6	0.5
L	42,375	132	1,184	4.3	808.5	808.5	809.0	0.5
M	44,192	80	958	5.4	809.2	809.2	809.9	0.7
N	44,942	77	814	5.3	810.0	810.0	810.7	0.7
O	45,494	60	770	5.6	810.5	810.5	811.3	0.7
P	46,759	55	757	5.7	811.7	811.7	812.5	0.8
Q	47,242	95	928	4.7	812.3	812.3	813.0	0.7
R	48,212	107	902	4.6	813.1	813.1	813.8	0.8
S	49,252	64	854	4.8	813.9	813.9	814.6	0.8
T	50,853	176	1,651	2.5	814.9	814.9	815.8	0.9
U	51,368	194	1,318	3.1	814.9	814.9	815.8	0.9
V	52,797	60	767	4.4	816.3	816.3	817.1	0.8
W	53,281	50	717	4.7	816.6	816.6	817.4	0.8
X	53,961	128	1,028	3.3	817.3	817.3	818.0	0.7
Y	54,563	89	954	3.5	817.8	817.8	818.5	0.7

[1]Feet above Hocking County Boundary

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Hocking River

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Hocking River (Cont.)								
Z	55,623	175	1,339	2.5	818.2	818.2	818.8	0.7
AA	56,915	212	1,815	1.9	818.8	818.8	819.6	0.7
AB	58,620	128	1,025	3.3	818.8	818.8	819.6	0.8
AC	59,807	109	859	3.9	819.6	819.6	820.4	0.8
AD	61,329	140	973	3.5	820.4	820.4	821.2	0.8
AE	61,534	291	1,805	1.9	821.0	821.0	821.8	0.8
AF	62,613	378	3,957	0.9	821.1	821.1	821.9	0.8
AG	65,584	210	1,739	1.7	821.1	821.1	821.9	0.8
AH	65,898	71	510	5.8	821.1	821.1	821.9	0.8
AI	67,371	172	968	3.1	823.2	823.2	823.9	0.7
AJ	68,130	119	792	3.7	823.8	823.8	824.3	0.5
AK	70,592	176	952	3.1	825.2	825.2	826.3	0.9
AL	73,043	597	1,229	1.2	827.6	827.6	828.0	0.4
AM	74,286	431	737	2.0	829.2	829.2	829.3	0.0
AN	76,048	184	526	2.8	832.9	832.9	833.6	0.7
AO	77,684	510	1,168	1.3	838.4	838.4	838.5	0.1
AP	79,205	128	466	3.2	841.3	841.3	841.8	0.5
AQ	82,338	45	219	6.7	849.1	849.1	849.3	0.2
AR	84,201	44	291	5.1	856.5	856.5	857.1	0.6
AS	85,586	42	226	6.5	860.6	860.6	861.1	0.6
AT	87,322	92	356	4.2	866.5	866.5	867.1	0.5
AU	88,370	55	235	6.3	871.1	871.1	871.9	0.8
AV	89,387	44	213	6.9	875.7	875.7	876.1	0.4
AW	90,489	43	208	7.1	880.9	880.9	881.6	0.7
AX	91,723	27	122	8.4	886.5	886.5	886.8	0.3

[1]Feet above Hocking County Boundary

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Hocking River

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Hocking River Diversion								
A	1,100	370	2,936	1.6	772.6	772.6	772.6	0.0
B	5,100	780	3,706	1.3	775.8	775.8	775.8	0.0
Hocking River Lateral A								
A	1,000	159	950	1.1	823.2	823.2	824.2	1.0
B	2,381	42	268	4.0	831.6	831.6	832.6	1.0
C	3,881	65	244	4.4	843.1	843.1	844.1	1.0
D	4,581	28	147	7.3	849.5	849.5	850.5	1.0
E	5,181	69	362	2.9	853.2	853.2	854.2	1.0
F	5,914	56	363	2.9	856.2	856.2	857.2	1.0
G	7,176	59	263	4.7	862.7	862.7	863.7	1.0
H	7,686	165	391	2.7	865.8	865.8	866.8	1.0
Hocking River Lateral B								
A	750	40	288	2.4	823.5	823.5	824.5	1.0
B	1,564	38	244	2.8	829.1	829.1	830.1	1.0
C	2,118	99	604	1.1	829.9	829.9	830.9	1.0
D	2,791	144	1,093	0.6	835.5	835.5	836.5	1.0
E	4,521	31	158	4.4	840.1	840.1	841.1	1.0
F	5,312	83	545	1.3	848.4	848.4	849.4	1.0
G	6,187	86	374	1.9	851.1	851.1	852.1	1.0
H	7,390	55	246	2.9	855.9	855.9	856.9	1.0
I	8,325	39	191	3.8	860.1	860.1	861.1	1.0

[1]Feet Above Confluence with Hocking River

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Hocking River Diversion, Hocking River Lateral A, Hocking River Lateral B

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Hocking River Lateral D								
A	4,139[1]	189	189	2.6	833.3	833.3	834.3	1.0
B	4,814[1]	114	558	3.1	835.5	835.5	836.5	1.0
C	6,314[1]	135	919	1.9	841.2	841.2	842.2	1.0
D	8,299[1]	132	510	3.4	848.4	848.4	848.9	0.5
E	9,799[1]	127	510	3.4	855.6	855.6	856.1	0.5
F	10,749[1]	102	410	3.9	860.1	860.1	860.6	0.5
G	12,099[1]	190	538	4.5	864.6	864.6	865.1	0.5
H	13,349[1]	96	900	1.8	866.1	866.1	866.6	0.5
I	13,949[1]	130	1,540	1.0	866.7	866.7	867.2	0.5
J	15,179[1]	86	1,303	1.2	869.2	869.2	869.7	0.5
K	16,599[1]	270	615	2.6	873.3	873.3	873.8	0.5
L	18,199[1]	45	155	8.4	880.4	880.4	880.9	0.5
Hunters Run								
A	1,064[2]	37	328	7.5	815.1	815.1	816.1	1.0
B	1,512[2]	38	342	7.2	817.0	817.0	817.6	0.6
C	2,289[2]	54	441	5.6	819.4	819.4	820.2	0.8
D	3,397[2]	40	385	6.4	821.9	821.9	822.6	0.7
E	4,957[2]	74	597	4.1	825.4	825.4	826.1	0.7
F	6,348[2]	42	304	8.1	829.6	829.6	830.3	0.7
G	6,781[2]	55	396	6.2	832.3	832.3	833.2	1.0
H	7,248[2]	50	293	8.4	833.5	833.5	834.2	0.7
I	8,261[2]	63	361	6.8	837.7	837.7	838.4	0.8
J	9,587[2]	68	362	6.8	844.3	844.3	844.5	0.2

[1]Feet Above Confluence with Hocking River [2]Feet above Mouth

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Hocking River Lateral D, Hunters Run

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Hunters Run (Cont.)								
K	10,057[1]	67	450	5.4	846.9	846.9	847.0	0.2
L	11,810[1]	62	357	6.9	851.7	851.7	852.7	1.0
M	12,683[1]	55	385	6.4	854.8	854.8	855.7	0.9
N	13,444[1]	41	317	7.7	858.2	858.2	859.0	0.8
O	14,705[1]	35	223	7.9	861.8	861.8	862.5	0.7
P	16,895[1]	35	246	7.2	869.8	869.8	870.5	0.7
Q	17,930[1]	35	266	6.6	873.8	873.8	874.1	0.3
R	18,727[1]	36	248	7.1	875.6	875.6	875.9	0.3
S	25,691[1]	64	252	5.3	898.8	898.8	899.2	0.4
T	26,807[1]	30	197	6.8	904.3	904.3	904.4	0.0
U	28,298[1]	30	140	5.7	909.7	909.7	909.7	0.0
V	29,086[1]	32	140	5.7	913.3	913.3	913.3	0.1
W	30,711[1]	125	681	1.2	925.2	925.2	926.2	1.0
X	32,335[1]	161	194	4.1	928.9	928.9	929.0	0.1
Y	33,244[1]	30	94	5.9	934.1	934.1	934.4	0.4
Z	34,179[1]	30	96	5.7	940.5	940.5	940.5	0.0
AA	35,180[1]	32	98	5.6	948.3	948.3	948.4	0.1
AB	35,579[1]	30	88	6.2	951.4	951.4	951.6	0.1
AC	36,471[1]	31	93	5.9	958.6	958.6	958.7	0.1
AD	37,218[1]	30	82	6.7	964.5	964.5	964.5	0.0
Little Rush Creek								
A	1,300[2]	516	2,836	1.8	795.5	795.5	796.5	1.0
B	5,100[2]	300	1,228	4.2	800.8	800.8	801.4	0.6
C	8,420[2]	N/A[3]	N/A[3]	N/A[3]	809.8	N/A[3]	N/A[3]	N/A[3]

[1]Feet above Mouth [2]Feet Above Confluence with Rush Creek [3]No data available

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Hunters Run, Little Rush Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Little Rush Creek (Cont.)								
D	9,650[1]	N/A[3]	N/A[3]	N/A[3]	812.9	N/A[3]	N/A[3]	N/A[3]
E	18,490[1]	N/A[3]	N/A[3]	N/A[3]	843.5	N/A[3]	N/A[3]	N/A[3]
F	24,740[1]	N/A[3]	N/A[3]	N/A[3]	857.0	N/A[3]	N/A[3]	N/A[3]
G	25,670[1]	N/A[3]	N/A[3]	N/A[3]	858.8	N/A[3]	N/A[3]	N/A[3]
H	27,300[1]	N/A[3]	N/A[3]	N/A[3]	861.3	N/A[3]	N/A[3]	N/A[3]
I	32,570[1]	N/A[3]	N/A[3]	N/A[3]	865.5	N/A[3]	N/A[3]	N/A[3]
J	38,710[1]	N/A[3]	N/A[3]	N/A[3]	871.9	N/A[3]	N/A[3]	N/A[3]
K	54,090[1]	N/A[3]	N/A[3]	N/A[3]	901.4	N/A[3]	N/A[3]	N/A[3]
Little Walnut Creek								
A	3,050[2]	299	2,281	2.1	863.7	863.7	864.7	1.0
B	5,250[2]	330	2,212	2.2	864.8	864.8	865.8	1.0
C	7,400[2]	467	2,873	1.7	866.3	866.3	867.3	1.0
D	9,250[2]	461	2,641	1.8	868.1	868.1	869.1	1.0
E	11,650[2]	283	1,722	2.7	872.1	872.1	873.1	1.0
F	12,960[2]	446	2,723	1.7	873.2	873.2	874.2	1.0
G	14,650[2]	221	1,265	3.2	875.2	875.2	876.2	1.0
H	15,490[2]	134	879	4.5	877.1	877.1	878.1	1.0
I	17,490[2]	153	792	3.4	880.5	880.5	881.5	1.0
J	18,470[2]	159	899	3.0	884.7	884.7	885.7	1.0
K	20,360[2]	93	522	5.2	890.4	890.4	891.4	1.0

[1]Feet Above Confluence with Rush Creek [2]Feet Above Confluence with Walnut Creek [3]No data available

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Little Rush Creek, Little Walnut Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Ohio Canal								
A	1,376[1]	111	608	2.4	828.6	828.6	828.7	0.1
B	2,609[1]	186	679	2.1	829.6	829.6	830.4	0.8
C	4,772[1]	34	283	3.8	834.6	834.6	835.5	1.0
D	5,495[1]	44	283	4.6	835.5	835.5	836.3	0.8
E	6,885[1]	379	1683	0.8	837.7	837.7	838.4	0.6
F	8,883[1]	250	1101	1.2	837.9	837.9	838.6	0.8
G	10,241[1]	403	1279	1.0	838.0	838.0	838.9	0.9
H	12,675[1]	440	1,245	1.0	839.0	839.0	840.0	1.0
Ohio Canal Lateral A								
A	1,600[2]	114	525	2.8	848.9	848.9	849.4	0.5
B	3,425[2]	117	631	1.2	856.3	856.3	856.8	0.5
C	4,825[2]	120	450	1.5	860.0	860.0	860.5	0.5
D	6,450[2]	40	135	5.1	868.4	868.4	868.9	0.5
E	9,275[2]	184	709	1.0	875.6	875.6	876.1	0.5
F	11,500[2]	114	265	2.5	883.8	883.8	884.3	0.5

[1]Feet above Mouth [2]Feet above Confluence with Ohio Canal

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Ohio Canal, Ohio Canal Lateral A

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Pawpaw Creek								
A	1,810[1]	407	2,892	2.1	844.7	844.7	845.7	1.0
B	3,550[1]	215	1,373	2.3	850.4	850.4	851.4	1.0
C	4,780[1]	270	2,820	1.1	855.1	855.1	856.1	1.0
D	5,585[1]	267	6,617	0.5	868.3	868.3	869.3	1.0
E	7,385[1]	196	3,382	1.0	868.4	868.4	869.4	1.0
F	9,005[1]	191	2,164	1.5	868.6	868.6	869.6	1.0
G	11,385[1]	88	728	3.3	871.0	871.0	872.0	1.0
Pawpaw Creek Tributary								
A	780[2]	78	662	1.9	868.7	868.7	869.7	1.0
B	1,490[2]	147	1,007	1.3	868.9	868.9	869.4	1.0
Pleasant Run								
A	1,100[3]	200	2,842	1.4	791.0	791.0	791.5	0.5
B	5,370[3]	392	1,670	2.1	798.6	798.6	799.1	0.5
C	8,170[3]	343	1,382	2.6	802.7	802.7	803.2	0.5
D	11,170[3]	346	1,376	2.4	807.3	807.3	807.8	0.5
E	12,890[3]	317	1,080	3.1	811.6	811.6	812.1	0.5
F	15,850[3]	302	986	3.4	817.2	817.2	817.7	0.5
G	17,520[3]	496	1,626	2.1	820.0	820.0	820.5	0.5
H	18,410[3]	616	1,543	1.7	821.3	821.3	822.3	1.0
I	20,035[3]	295	1,015	2.6	826.6	826.6	827.6	1.0
J	21,435[3]	416	1,416	1.9	828.2	828.2	829.2	1.0
K	22,770[3]	165	774	3.4	831.8	831.8	832.8	1.0

[1]Feet above Confluence with Walnut Creek [2]Feet above Confluence with Pawpaw Creek [3]Feet above Confluence with Hocking River

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Pawpaw Creek, Pawpaw Creek Tributary, Pleasant Run

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Pleasant Run (Cont.)								
L	24,525[1]	287	982	2.7	835.2	835.2	836.2	1.0
M	24,795[1]	75	377	7.0	835.7	835.7	836.7	1.0
N	26,480[1]	188	856	3.0	841.9	841.9	842.4	0.5
O	28,470[1]	171	724	3.6	847.6	847.6	848.1	0.5
P	29,150[1]	179	710	3.4	849.3	849.3	849.8	0.5
Q	30,940[1]	262	1,107	2.2	854.5	854.5	855.0	0.5
R	32,080[1]	132	598	4.1	859.2	859.2	859.7	0.5
S	34,380[1]	173	807	3.0	863.7	863.7	864.2	0.5
T	35,710[1]	303	976	2.5	866.2	866.2	866.7	0.5
U	38,070[1]	174	824	3.0	873.6	873.6	874.1	0.5
V	40,890[1]	306	1,031	2.4	878.5	878.5	879.0	0.5
W	42,870[1]	475	1,493	1.6	885.6	885.6	886.1	0.5
X	44,810[1]	407	1,315	1.8	888.3	888.3	888.8	0.5
Y	45,790[1]	340	1,860	1.2	892.9	892.9	893.4	0.5
Z	47,770[1]	196	785	2.8	897.2	897.2	897.7	0.5
AA	49,240[1]	270	904	2.4	900.0	900.0	900.5	0.5
AB	51,420[1]	557	1,558	1.4	904.0	904.0	904.5	0.5
AC	53,620[1]	51	339	6.5	916.5	916.5	917.0	0.5
Pleasant Run Lateral								
A	2,840[2]	390	1,007	1.5	821.2	821.2	821.7	0.5
B	5,240[2]	307	806	1.3	826.9	826.9	827.4	0.5

[1]Feet above Confluence with Hocking River [2]Feet above Confluence with Pleasant Run

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Poplar Creek								
A	2,080	185	1,213	5.1	806.7	806.7	807.7	1.0
B	3,180	295	1,816	3.4	809.4	809.4	810.4	1.0
C	3,580	202	1,440	4.3	810.6	810.6	811.6	1.0
D	6,140	182	1,147	5.4	816.4	816.4	817.4	1.0
E	10,090	174	1,154	5.3	827.0	827.0	828.0	1.0
F	11,180	77	642	8.9	831.3	831.3	832.3	1.0
G	11,560	450	3,524	1.6	836.5	836.5	837.5	1.0
H	14,510	193	1,227	4.7	841.8	841.8	842.8	1.0
I	15,830	199	1,339	4.3	845.3	845.3	846.3	1.0
J	17,530	226	1,262	4.5	850.8	850.8	851.8	1.0
K	18,730	78	635	8.5	854.4	854.4	855.4	1.0
L	19,420	598	3,920	1.4	857.7	857.7	858.7	1.0
M	21,175	95	770	7.0	864.3	864.3	865.3	1.0
N	25,365	153	948	5.1	875.9	875.9	876.9	1.0
O	26,975	105	722	6.7	883.7	883.7	884.7	1.0
P	28,435	65	561	7.6	889.6	889.6	890.6	1.0
Q	29,045	104	849	5.0	891.9	891.9	892.9	1.0
R	31,465	146	860	5.0	901.2	901.2	902.2	1.0
S	33,795	83	616	7.0	909.1	909.1	910.1	1.0
T	35,295	230	1,000	4.3	914.3	914.3	915.3	1.0
U	35,715	73	466	4.3	915.4	915.4	916.4	1.0
V	37,115	57	320	6.2	922.2	922.2	923.2	1.0
W	39,245	47	291	6.9	933.4	933.4	934.4	1.0
X	40,015	54	324	6.2	937.9	937.9	938.9	1.0
Y	42,155	37	249	8.0	951.5	951.5	952.5	1.0

[1]Feet above Confluence with Walnut Creek

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Poplar Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Raccoon Run								
A	3,190[1]	N/A[3]	N/A[3]	N/A[3]	790.1	N/A[3]	N/A[3]	N/A[3]
B	6,150[1]	N/A[3]	N/A[3]	N/A[3]	795.5	N/A[3]	N/A[3]	N/A[3]
C	11,570[1]	N/A[3]	N/A[3]	N/A[3]	801.4	N/A[3]	N/A[3]	N/A[3]
D	15,160[1]	N/A[3]	N/A[3]	N/A[3]	807.6	N/A[3]	N/A[3]	N/A[3]
E	16,750[1]	N/A[3]	N/A[3]	N/A[3]	810.9	N/A[3]	N/A[3]	N/A[3]
F	18,130[1]	N/A[3]	N/A[3]	N/A[3]	811.7	N/A[3]	N/A[3]	N/A[3]
G	20,560[1]	N/A[3]	N/A[3]	N/A[3]	816.3	N/A[3]	N/A[3]	N/A[3]
H	24,000[1]	N/A[3]	N/A[3]	N/A[3]	822.1	N/A[3]	N/A[3]	N/A[3]
I	25,570[1]	N/A[3]	N/A[3]	N/A[3]	824.2	N/A[3]	N/A[3]	N/A[3]
J	32,810[1]	N/A[3]	N/A[3]	N/A[3]	842.1	N/A[3]	N/A[3]	N/A[3]
K	34,049[1]	274	955	1.5	843.7	843.7	844.7	1.0
Rush Creek								
A	1,780[2]	472	4517	3.4	769.8	769.8	770.4	0.5
B	3,960[2]	N/A[3]	N/A[3]	N/A[3]	769.9	N/A[3]	N/A[3]	N/A[3]
C	8,490[2]	N/A[3]	N/A[3]	N/A[3]	770.8	N/A[3]	N/A[3]	N/A[3]
D	15,000[2]	N/A[3]	N/A[3]	N/A[3]	771.9	N/A[3]	N/A[3]	N/A[3]
E	18,150[2]	N/A[3]	N/A[3]	N/A[3]	772.2	N/A[3]	N/A[3]	N/A[3]
F	23,640[2]	N/A[3]	N/A[3]	N/A[3]	772.3	N/A[3]	N/A[3]	N/A[3]
G	58,760[2]	N/A[3]	N/A[3]	N/A[3]	785.8	N/A[3]	N/A[3]	N/A[3]
H	61,180[2]	N/A[3]	N/A[3]	N/A[3]	786.8	N/A[3]	N/A[3]	N/A[3]
I	63,260[2]	N/A[3]	N/A[3]	N/A[3]	787.5	N/A[3]	N/A[3]	N/A[3]
J	65,040[2]	N/A[3]	N/A[3]	N/A[3]	787.9	N/A[3]	N/A[3]	N/A[3]
K	68,370[2]	N/A[3]	N/A[3]	N/A[3]	789.2	N/A[3]	N/A[3]	N/A[3]
L	70,380[2]	837	3,452	2.68	789.9	789.9	789.9	0.0

[1]Feet above Confluence with Rush Creek [2]Feet above Confluence with Hocking River [3]No data available

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Raccoon Run, Rush Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Rush Creek (Cont.)								
M	73,880[1]	166	1,325	5.47	791.4	791.4	791.7	0.3
N	76,700[1]	134	1,039	6.98	794.3	794.3	794.8	0.5
O	80,350[1]	N/A[3]	N/A[3]	N/A[3]	796.8	N/A[3]	N/A[3]	N/A[3]
P	87,000[1]	N/A[3]	N/A[3]	N/A[3]	799.8	N/A[3]	N/A[3]	N/A[3]
Q	92,788[1]	269	1807	3.01	802.2	802.2	803.2	1.0
R	94,944[1]	182	1392	3.91	803.4	803.4	804.3	0.9
S	95,433[1]	99	1055	5.16	803.5	803.5	804.5	1.0
T	95,564[1]	85	1085	5.01	803.9	803.9	804.8	0.9
U	96,056[1]	87	1181	4.60	804.3	804.3	805.2	0.8
V	96,854[1]	418	1833	2.97	805.0	805.0	805.8	0.8
South Fork Licking River								
A	81,280[2]	1,896	9,389	0.9	885.5	885.5	886.3	0.8
B	82,120[2]	1,553	9,068	0.9	887.9	887.9	888.5	0.6
C	83,889[2]	2,055	11,143	0.5	888.2	888.2	889.2	1.0
D	85,467[2]	1,521	5,270	1.3	891.4	891.4	891.4	0.0
E	86,106[2]	1,725	9,865	0.7	892.2	892.2	892.4	0.2
Stonewall Creek								
A	512[4]	14	46	7.9	860.0	859.9[5]	859.9[5]	0.0
B	1,269[4]	21	67	5.5	865.6	865.6	865.6	0.0
C	1,616[4]	29	113	3.2	869.3	869.3	869.3	0.0
D	1,818[4]	22	124	2.9	873.4	873.4	873.4	0.0

[1]Feet above Confluence with Hocking River [2]Feet Above Confluence with North Fork Licking River [3]No data available

[4]Feet Above Mouth [5]Elevations Without Considering Backwater Effects From Hunters Run

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Rush Creek, South Fork Licking River, Stonewall Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Stonewall Creek (Cont.)								
E	2,370	12	46	7.9	876.9	876.9	876.9	0.0
F	2,816	30	79	4.6	882.1	882.1	882.2	0.0
G	3,093	23	166	2.2	889.1	889.1	889.1	0.0
H	3,471	28	72	4.8	889.3	889.3	889.3	0.0
I	3,777	17	41	8.3	891.8	891.8	891.8	0.0
J	4,014	24	51	6.6	895.3	895.3	895.3	0.0
K	4,066	74	364	0.9	899.6	899.6	900.5	0.9
Sycamore Creek								
A	1,875	156	687	5.5	772.0	772.0	772.7	0.7
B	4,320	300	2,923	1.7	783.9	783.9	784.7	0.8
C	7,045	229	1,710	3.0	785.2	785.2	786.0	0.8
D	11,310	281	1,546	3.3	791.5	791.5	792.5	1.0
E	17,390	311	1,706	3.0	802.4	802.4	803.3	0.9
F	21,090	293	2,002	2.5	811.0	811.0	812.0	1.0
G	22,925	183	1,119	4.5	812.6	812.6	813.1	0.5
H	23,540	190	1,359	3.7	814.2	814.2	814.6	0.4
I	24,245	240	1,155	4.4	814.9	814.9	815.7	0.8
J	25,345	205	1,034	4.3	818.5	818.5	818.6	0.1
K	27,415	250	900	5.0	821.8	821.8	822.2	0.4
L	28,730	97	510	8.8	824.6	824.6	825.0	0.4
M	29,175	200	1223	3.7	827.1	827.1	827.5	0.4
N	30,670	220	1055	4.3	829.5	829.5	829.9	0.4
O	31,275	240	869	5.0	831.5	831.5	831.9	0.4

[1]Feet above Mouth

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Sycamore Creek (Cont.)								
P	31,670[1]	250	861	5.2	832.6	832.6	833.2	0.6
Q	32,515[1]	270	1046	4.3	837.4	837.4	838.1	0.7
R	32,950[1]	310	1555	2.9	838.5	838.5	839.3	0.8
S	34,170[1]	340	2104	2.1	841.3	841.3	842.2	0.9
T	35,638[1]	100	632	4.50	846.1	846.1	847.0	0.9
U	38,132[1]	194	985	2.9	853.9	853.9	854.9	1.0
V	39,542[1]	137	641	4.5	860.5	860.5	860.6	0.1
W	44,852[1]	84	408	6.3	888.1	888.1	888.6	0.5
X	45,882[1]	40	256	10.0	896.7	896.7	896.8	0.1
Y	48,792[1]	86	447	5.7	910.3	910.3	910.5	0.2
Z	53,292[1]	38	281	8.2	943.4	943.4	944.1	0.7
AA	55,406[1]	56	436	5.3	952.4	952.4	953.3	0.9
AB	55,541[1]	57	410	5.6	953.3	953.3	953.9	0.6
AC	60,061[1]	67	282	4.7	978.3	978.3	979.2	0.9
AD	63,791[1]	52	269	4.9	999.0	999.0	999.9	0.9
AE	66,132[1]	82	429	2.4	1013.4	1013.4	1014.3	0.9
AF	67,127[1]	85	403	2.6	1018.2	1018.2	1019.0	0.8
Sycamore Creek Overflow								
A	505[2]	N/A[3]	N/A[3]	N/A[3]	836.4	N/A[3]	N/A[3]	N/A[3]
B	925[2]	N/A[3]	N/A[3]	N/A[3]	837.9	N/A[3]	N/A[3]	N/A[3]
C	1,175[2]	N/A[3]	N/A[3]	N/A[3]	839.1	N/A[3]	N/A[3]	N/A[3]
D	1,530[2]	N/A[3]	N/A[3]	N/A[3]	840.6	N/A[3]	N/A[3]	N/A[3]

[1]Feet above Mouth [2]Feet Above Convergence with Sycamore Creek [3]No data available

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Sycamore Creek, Sycamore Creek Overflow

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Tarhe Run								
A	2,259[1]	365	1,495	1.4	820.4	820.4	821.4	1.0
B	3,109[1]	309	801	2.6	823.5	823.5	824.5	1.0
C	4,309[1]	51	261	8.0	831.0	831.0	832.0	1.0
D	4,559[1]	78	453	2.8	833.9	833.9	834.9	1.0
E	4,869[1]	58	325	3.9	837.3	837.3	838.3	1.0
F	6,069[1]	115	451	2.8	841.2	841.2	842.2	1.0
Tributary A								
A	4,630[1]	N/A[3]	N/A[3]	N/A[3]	779.8	N/A[3]	N/A[3]	N/A[3]
B	6,450[1]	N/A[3]	N/A[3]	N/A[3]	786.2	N/A[3]	N/A[3]	N/A[3]
C	8,640[1]	N/A[3]	N/A[3]	N/A[3]	800.6	N/A[3]	N/A[3]	N/A[3]
D	10,320[1]	N/A[3]	N/A[3]	N/A[3]	818.6	N/A[3]	N/A[3]	N/A[3]
Tributary B								
A	1,150[2]	N/A[3]	N/A[3]	N/A[3]	772.9	N/A[3]	N/A[3]	N/A[3]
B	3,560[2]	N/A[3]	N/A[3]	N/A[3]	775.4	N/A[3]	N/A[3]	N/A[3]
C	5,230[2]	N/A[3]	N/A[3]	N/A[3]	783.9	N/A[3]	N/A[3]	N/A[3]
Tributary H								
N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]	N/A[3]
Tributary I								
A	2,950[4]	N/A[3]	N/A[3]	N/A[3]	806.3	N/A[3]	N/A[3]	N/A[3]
B	5,990[4]	N/A[3]	N/A[3]	N/A[3]	822.9	N/A[3]	N/A[3]	N/A[3]

[1]Feet above Mouth [2]Feet above Confluence with Rush Creek [3]No data available [4]Feet Above Confluence with Raccoon Run

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Tarhe Run, Tributaries A, B, H and I

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Turkey Run								
A	1,690[1]	N/A[3]	N/A[3]	N/A[3]	785.8	N/A[3]	N/A[3]	N/A[3]
B	4,340[1]	N/A[3]	N/A[3]	N/A[3]	788.8	N/A[3]	N/A[3]	N/A[3]
C	8,870[1]	N/A[3]	N/A[3]	N/A[3]	798.3	N/A[3]	N/A[3]	N/A[3]
Unnamed Tributary to Sycamore Creek								
A	500[1]	70	325	3.2	842.0	842.0	842.9	0.9
B	3,325[1]	63	286	3.6	849.3	849.3	850.3	1.0
C	5,825[1]	86	404	2.6	857.9	857.9	858.2	0.3
D	10,446[1]	73	340	2.4	871.5	871.5	872.3	0.8
E	11,866[1]	49	202	4.0	875.7	875.7	876.6	0.9
F	14,337[1]	587	530	1.5	882.0	882.0	882.8	0.8
Walnut Creek								
A	175[2]	1,203	13,418	1.7	762.4	762.4	763.4	1.0
B	2,775[2]	1,063	11,401	2.1	762.7	762.7	763.7	1.0
C	4,575[2]	871	8,558	2.7	763.6	763.6	764.6	1.0
D	6,875[2]	922	9,676	2.4	764.5	764.5	765.5	1.0
E	9,075[2]	294	2,614	8.9	769.1	769.1	770.1	1.0
F	10,455[2]	1,796	19,975	1.2	770.6	770.6	771.6	1.0
G	14,705[2]	1,656	14,224	1.6	771.7	771.7	772.7	1.0
H	18,235[2]	1,248	9,407	1.9	773.3	773.3	774.3	1.0
I	20,785[2]	1,215	8,173	2.2	774.9	774.9	775.9	1.0
J	21,935[2]	1,382	10,577	1.7	777.4	777.4	778.4	1.0
K	24,585[2]	1,514	9,520	1.9	778.7	778.7	779.7	1.0

[1]Feet above Mouth [2]Feet above Franklin County Boundary [3]No data available

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Turkey Run, Unnamed Tributary to Sycamore Creek, Walnut Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Walnut Creek (Cont.)								
L	29,805	1,038	6,697	2.7	783.5	783.5	784.5	1.0
M	30,500	1,226	11,680	1.5	788.1	788.1	789.1	1.0
N	32,220	790	7,327	2.4	788.8	788.8	789.8	1.0
O	34,550	283	2,943	5.6	790.8	790.8	791.8	1.0
P	36,470	887	7,313	2.3	792.2	792.2	793.2	1.0
Q	40,970	840	5,877	2.8	795.9	795.9	796.9	1.0
R	44,320	707	4,855	3.3	799.6	799.6	800.6	1.0
S	44,750	1,025	9,451	1.7	802.6	802.6	803.6	1.0
T	46,600	607	4,523	3.0	803.9	803.9	804.9	1.0
U	49,010	883	5,600	2.4	806.1	806.1	807.1	1.0
V	49,910	624	4,232	3.2	806.9	806.9	807.9	1.0
W	54,360	677	4,895	2.7	811.6	811.6	812.6	1.0
X	55,880	695	4,570	2.9	812.8	812.8	813.8	1.0
Y	57,380	884	4,992	2.7	814.1	814.1	815.1	1.0
Z	57,800	198	1,899	7.1	815.0	815.0	816.0	1.0
AA	61,620	387	3,323	4.0	820.3	820.3	821.3	1.0
AB	65,900	553	3,674	3.6	824.9	824.9	825.9	1.0
AC	68,310	295	2,363	5.6	828.2	828.2	829.2	1.0
AD	71,200	356	2,980	4.4	831.9	831.9	832.9	1.0
AE	77,350	501	3,844	3.4	838.8	838.8	839.8	1.0
AF	79,470	322	3,879	3.4	842.6	842.6	843.6	1.0
AG	81,400	721	4,861	2.0	844.1	844.1	845.1	1.0
AH	84,060	703	5,177	1.9	845.2	845.2	846.2	1.0
AI	86,110	451	3,222	3.0	846.5	846.5	847.5	1.0

[1]Feet above Franklin County Boundary

Table 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

FLOODWAY DATA

Walnut Creek

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Walnut Creek (Cont.)								
AJ	89,755[1]	478	3,745	2.6	851.1	851.1	852.1	1.0
AK	93,055[1]	552	4,377	2.2	853.2	853.2	854.2	1.0
AL	95,835[1]	259	2,426	4.0	856.0	856.0	857.0	1.0
AM	98,155[1]	420	3,740	2.6	858.0	858.0	859.0	1.0
AN	99,665[1]	561	4,443	2.2	858.9	858.9	859.9	1.0
AO	101,615[1]	396	3,193	3.0	860.4	860.4	861.4	1.0
AP	101,865[1]	376	3,333	2.9	861.4	861.4	862.4	1.0
AQ	106,445[1]	627	3,627	1.8	863.9	863.9	864.9	1.0
AR	109,695[1]	562	3,059	2.2	866.4	866.4	867.4	1.0
AS	111,115[1]	334	2,343	2.9	868.6	868.6	869.6	1.0
AT	112,215[1]	329	2,267	2.9	869.7	869.7	870.7	1.0
Willow Run								
A	998[2]	51	252	3.2	819.9	819.9	820.0	0.1
B	2,181[2]	63	266	3.0	825.1	825.1	825.9	0.8
C	2,878[2]	68	297	2.7	828.2	828.2	828.9	0.7
D	2,968[2]	26	134	6.0	828.2	828.2	828.7	0.5
E	3,316[2]	48	230	3.3	829.7	829.7	830.0	0.3
F	3,499[2]	26	135	5.6	829.9	829.9	830.1	0.2
G	3,823[2]	40	199	3.8	830.8	830.8	831.6	0.8
H	6,688[2]	35	132	3.7	849.5	849.5	850.4	0.9
I	10,778[2]	28	106	4.6	885.1	885.1	885.6	0.5
J	12,218[2]	42	109	2.8	893.9	893.9	894.0	0.1
K	15,598[2]	14	58	5.2	928.4	928.4	929.2	0.8

[1]Feet above Franklin County Boundary [2]Feet above Mouth

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
Wilson Creek								
A	241	25	68	8.8	883.7	883.7	883.7	0.0
B	688	34	93	6.4	887.6	887.6	887.6	0.0
C	1,086	44	92	6.5	891.6	891.6	891.7	0.1
D	1,146	30	87	6.9	892.2	892.2	892.2	0.0
E	1,296	49	650	0.9	903.2	903.2	903.2	0.0
F	2,337	39	234	2.6	903.2	903.2	903.2	0.0
G	3,210	37	118	4.5	903.8	903.8	904.1	0.3

[1]Feet above Mouth

5.0 INSURANCE APPLICATION

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A	The flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that is determined in the FIS by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no BFEs or base flood depths are shown within this zone.
Zone AE	The flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
Zone X	The flood insurance risk zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by levees. No BFEs or base flood depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP (FIRM)

The FIRM is designed for flood insurance and floodplain management applications.

The FIRM for Fairfield County is, for insurance purposes, the principal result of the FIS. This map (published separately) contains the official delineation of flood insurance zones and BFE lines. BFE lines show the locations of the expected whole-foot water-surface elevations of the base flood. This map is developed in accordance with the latest flood insurance map preparation guidelines published by FEMA.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the existing conditions 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use the zones and base flood elevations for existing conditions in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens and symbols, the 1- and 0.2-percent-chance-annual floodplains. Floodways for the 1-percent-annual-chance flood extent and the locations of selected cross-sections used in the hydraulic analyses and floodway computations are shown where applicable.

The current FIRM presents flooding information for the entire geographic area of Fairfield County. Previously, separate FIRMs were prepared for each incorporated community and for the unincorporated areas of the county with identified special flood hazard areas. Historical data relating to the maps prepared for each community are presented in Table 11.

7.0 OTHER STUDIES

Due to being based on more up-to-date analyses, this FIS supersedes previously printed FISs for Fairfield County, Ohio. This FIS also supersedes the Flood Boundary and Floodway Maps for Fairfield County that were printed as part of previous FISs. The information on the Flood Boundary and Floodway Maps has been added to the FIRM accompanying this FIS. This report either supersedes or is compatible with all previous studies published on the streams studies in this report and should be considered authoritative for the purposes of the NFIP.

FISs have been prepared for Franklin County, Ohio (Reference 47), Hocking County, Ohio (Reference 48), Licking County, Ohio (Reference 49), Perry County, Ohio (Reference 50), and Pickaway County, Ohio (Reference 51). The results of these studies will be in agreement with the results of this countywide FIS.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in preparation of this study can be obtained by contacting the FEMA, Mitigation Division, 536 South Clark Street, Sixth Floor, Chicago, Illinois, 60605.

Future revisions may be made that do not result in the republishing of the FIS Report. To ensure that any user is aware of all revisions, it is advisable to contact the map repository of flood hazard data located in the community.

Community Name	Initial Identification	Flood Hazard Boundary Map Revisions Date(s)	FIRM Effective Date	FIRM Revision Date
* Amanda, Village of	N/A	None	N/A	None
Baltimore, Village of	June 21, 1974	April 16, 1976	December 17, 1991	None
Bremen, Village of	June 21, 1974	June 4, 1976	September 2, 1982	December 15, 1990
** Buckeye Lake, Village of	August 15, 1984		August 15, 1984	May 2, 2007
				January 6, 2012
Carroll, Village of	September 22, 1978	None	January 6, 2012	None
Fairfield County	February 10, 1978	June 20, 1980	April 17, 1989	April 17, 1996
(Unincorporated Areas)		July 10, 1981		September 19, 2007
Lancaster, City of	May 17, 1974	March 28, 1975	May 1, 1980	January 14, 1983
				April 17, 1989
* Lithopolis, Village of	N/A	None	N/A	None
Millersport, Village of	January 31, 1975	None	February 1, 1991	None
Pickerington, City of	June 28, 1974	February 28, 1975	August 5, 1991	September 19, 2007
		June 25, 1976		
		December 16, 1977		
		May 18, 1979		
* Pleasantville, Village of	N/A	None	N/A	None
* Rushville, Village of	N/A	None	N/A	None
* Stoutsville, Village of	N/A	None	N/A	None
Sugar Grove, Village of	August 30, 1974	June 27, 1975	September 2, 1982	None
* Tarlton, Village of	N/A	None	N/A	None
Thurston, Village of	January 31, 1975	May 25, 1979	November 23, 1984	None
*West Rushville, Village of	N/A	None	N/A	None

*No Special Flood Hazard Areas Identified ** Dates are From Licking County

Table 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OHIO
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

9.0 BIBLIOGRAPHY AND REFERENCES

1. ----------, Flood Insurance Study, Village of Bremen, Fairfield County, Ohio, December 1990.
2. U.S. Department of Agriculture, Soil Conservation Service, Flood Hazard Study, Rush Creek, September 1980.
3. ----------, Flood Insurance Study, Fairfield County, Ohio, (Unincorporated Areas), April 1989.
4. U.S. Department of Agriculture, Soil Conservation Service, Flood Hazard Analyses Report. Hocking River. Fairfield County. Ohio, April 1977.
5. U.S. Department of Agriculture, Soil Conservation Service, Flood Hazard Analyses Report. Upper Hocking River. Fairfield County. Ohio, February 1979.
6. U.S. Department of Agriculture, Soil Conservation Service, Flood Hazard Study. Rush Creek. Fairfield. Hocking. and Perry Counties. Ohio, September 1980.
7. U.S. Department of Agriculture, Soil Conservation Service, Flood Plain Management Study. Walnut Creek. Fairfield County. Ohio, September 1983.
8. ----------, Flood Insurance Study, Licking County, Ohio, (Unincorporated Areas), December 1983.
9. U.S. Department of Agriculture, Soil Conservation Service, Flood Hazard Analyses Report. Blacklick Creek. Ohio, October 1975.
10. Ohio Department of natural Resources, Flood Plain Information Study, Sycamore Creek. Fairfield County. Ohio, May 1975.
11. ----------, Flood Insurance Study, Fairfield County, Ohio, (Unincorporated Areas), April 1996.
12. ----------, Flood Insurance Study, City of Lancaster, Fairfield County, Ohio, April 1989.
13. ----------, Flood Insurance Study, Village of Pickerington, Fairfield and Franklin County, Ohio, August 1991.
14. ----------, Flood Insurance Study, City of Pickerington, Fairfield and Franklin County, Ohio, September 2007.
15. ----------, Flood Insurance Study, Village of Sugar Grove, Fairfield County, Ohio, March 1982.
16. U.S. Department of Agriculture, Soil Conservation Service, Flood Hazard Analysis Study, Hocking River, April 1977.
17. U.S. Census Bureau's 2008 Population Estimate for Fairfield County, Ohio; retrieved June 11, 2009, from http://factfinder.census.gov.
18. U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Fairfield County. Ohio, March 1960.
19. State of Ohio, Department of Natural Resources, Bulletin No. 15, Climatic Factors of Ohio's Water Resources, May 1950.
20. U.S. Census Bureau's 2007 Population Estimate for Fairfield County, Ohio; retrieved June 11, 2009, from http://factfinder.census.gov.

21. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Services, Climatological Data for Ohio, Asheville, North Carolina, 1976.

22. U.S. Department of Agriculture, Soil Conservation Service, Final Environmental Impact Statement, Rush Creek Watershed, Columbus, Ohio, August 1978.

23. Federal Emergency Management Agency, Flood Insurance Study, Fairfield County. Ohio (Unincorporated Areas), Washington, D.C., September 5, 2007.

24. U.S. Department of Agriculture, Soil Conservation Service, Watershed Plan and Environmental Impact Statement for South Fork Licking River Watershed, Perry and Fairfield Countie, Ohio, June 1980.

25. Fairfield County Regional Planning Commission, Fairfield County Subdivision Regulations, December 1973, updated September 1976.

26. 74th Congress of the United States, Public Law No. 461, Upper Hocking {Pilot} Watershed Project, constructed under the authority of the Soil Conservation Act of 1935, in participation and coordination with the Fairfield Soil Conservation District and the Hunters Run Conservancy District.

27. U.S. Department of Agriculture, Soil Conservation Service, Watershed Plan and Environmental Assessment for North Hocking Watershed, Ohio, Columbus, Ohio, April 1982.

28. U.S. Department of Agriculture, Soil Conservation Service, Technical Release No. 20, Computer Program. Project Formulation. Hydrology, Washington, D.C., 1965.

29. State of Ohio, Department of Natural Resources, Division of Water, Bulletin 45, Floods in Ohio - Magnitude and Frequency, May 1977.

30. U.S. Department of Agriculture, Soil Conservation Service, Final Environmental Impact Statement. Rush Creek Watershed, Columbus, Ohio, August 1978.

31. U.S. Department of Agriculture, Soil Conservation Service, Work Plan. Rush Creek Watershed, Columbus, Ohio, July 1963.

32. Federal Emergency Management Agency, Flood Insurance Study. Franklin County and Incorporated Areas. Ohio, Washington, D.C., August 2, 1995.

33. U.S. Department of Commerce, National Weather Service, Technical Paper No. 40, Rainfall Frequency Atlas of the United States, Washington, D.C., January 1963.

34. U.S. Department of the Interior, U.S. Geological Survey, Flood Characteristics of Urban Watersheds in the United States, Water Supply Paper 2207, Sauer, V.B., Thomas, W.O., Jr., Stricker, V.A., and Wilson, K.V., 1983.

35. U.S. Department of Agriculture, Soil Conservation Service, Watershed Plan and Environmental Impact Statement for South Fork Licking River Watershed, Perry and Franklin Counties, Ohio, June 1980.

36. U.S. Geological Survey Water Resources Investigations Report 03-4164, Techniques for Estimating Flood Peak Discharges of Rural Unregulated Streams in Ohio, Koltun, G.F., 2003.

37. U.S. Geological Survey Scientific Investigations Report 2006-5312, A Streamflow Statistics (StreamStats) Web Application for Ohio, Koltun, G.F., Kula, S.P., and Puskas, B.M., 2006

38. Kosanchick and Associates, Inc., River Valley Displacement and Relief Basin Project, Columbus, Ohio, October 1985.

39. SEICO, Inc., Flood Analyses of the Hocking River for the Lancaster Wastewater Treatment Plant Improvements in Lancaster, Ohio, Columbus, Indiana, March 1984.

40. Henderson Aerial Surveys Inc., 2-Foot Contour Interval Topographic Map for Flood Insurance Study, Scale 1:4,800, Contour Interval 2 Feet: Village of Pickerington, April 1988.

41. U.S. Department of Agriculture, Soil Conservation Service, Technical Release No. 61, WSP-2 Computer Program, Washington, D.C., May 1976.

42. U.S. Department of Transportation, Federal Highway Administration, Bureau of Public Roads, Hydraulic Design Series No.1, Hydraulics of Bridge Waterways, Washington, D.C., 1970.

43. Soil Conservation Service, Technical Release No. 64, Floodway Determination Computer Program, Glenn Dale, Maryland, June 1978.

44. U.S. Department of Transportation, Federal Highway Administration, Report No. FHW A/RD-86 108, Bridge Waterways Analysis Model: Research Report, J.L. Shearman, W.H. Kirby, W.R. Snyder, and H.N. Flippo, July 1986.

45. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-RAS, River Analysis System, Version 3.0.1, Davis, California, March 2001.

46. U.S. Army Corps of Engineers, Topographic Engineering Center, retrieved on March 20, 2009, from http://crunch.tec.army.mil/software/corpscon/corpscon.html.

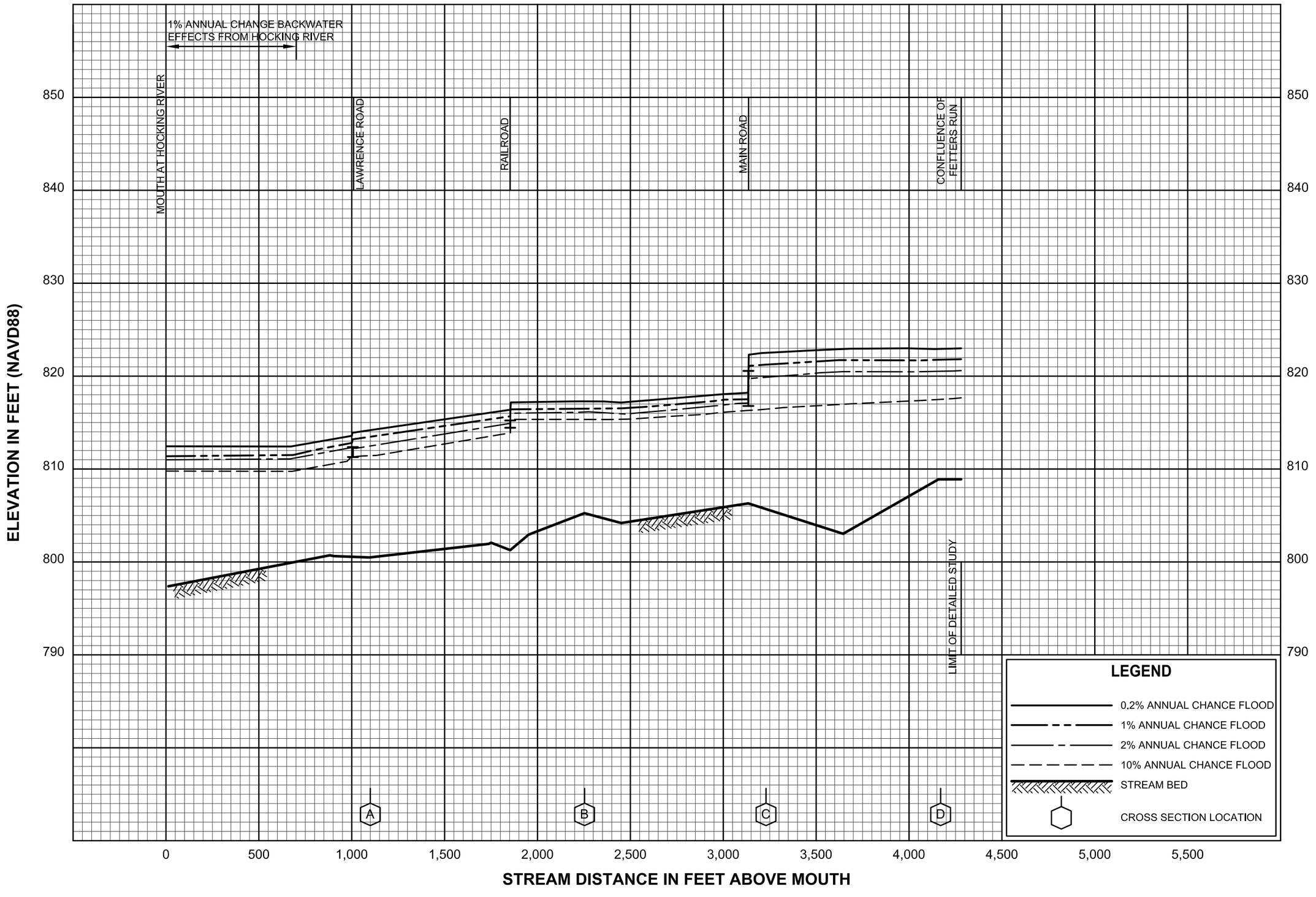
47. ----------, Flood Insurance Study, Franklin County, Ohio and Incorporated Areas, June, 2008.

48. ----------, Flood Insurance Study, Hocking County, Ohio and Incorporated Areas, XXXX.

49. ----------, Flood Insurance Study, Licking County, Ohio and Incorporated Areas, May, 2007.

50. ----------, Flood Insurance Study, Perry County, Ohio and Incorporated Areas, XXXX

51. ----------, Flood Insurance Study, Pickaway County, Ohio and Incorporated Areas, XXXX.



FLOOD PROFILES

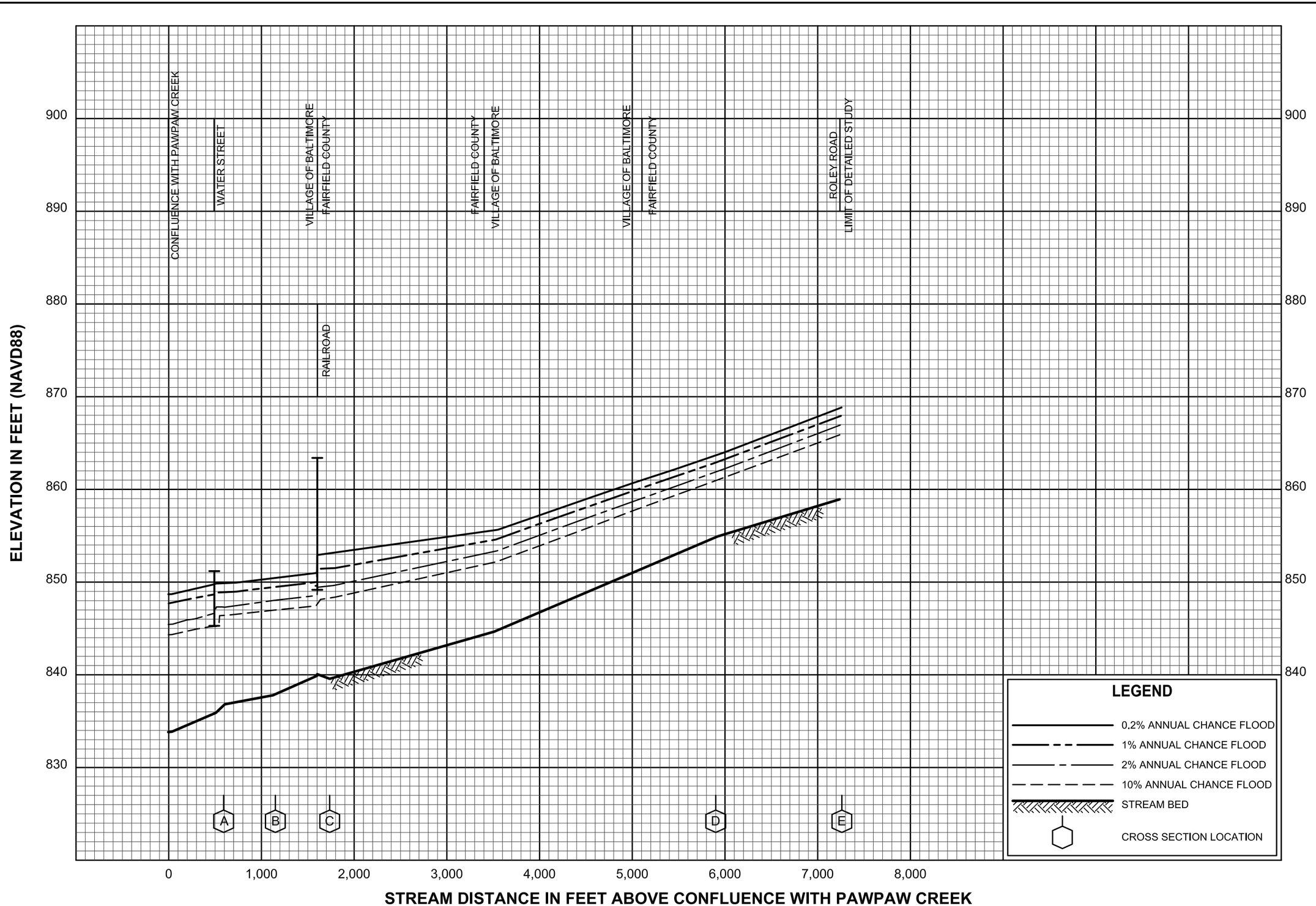
BALDWIN RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

001P



FLOOD PROFILES

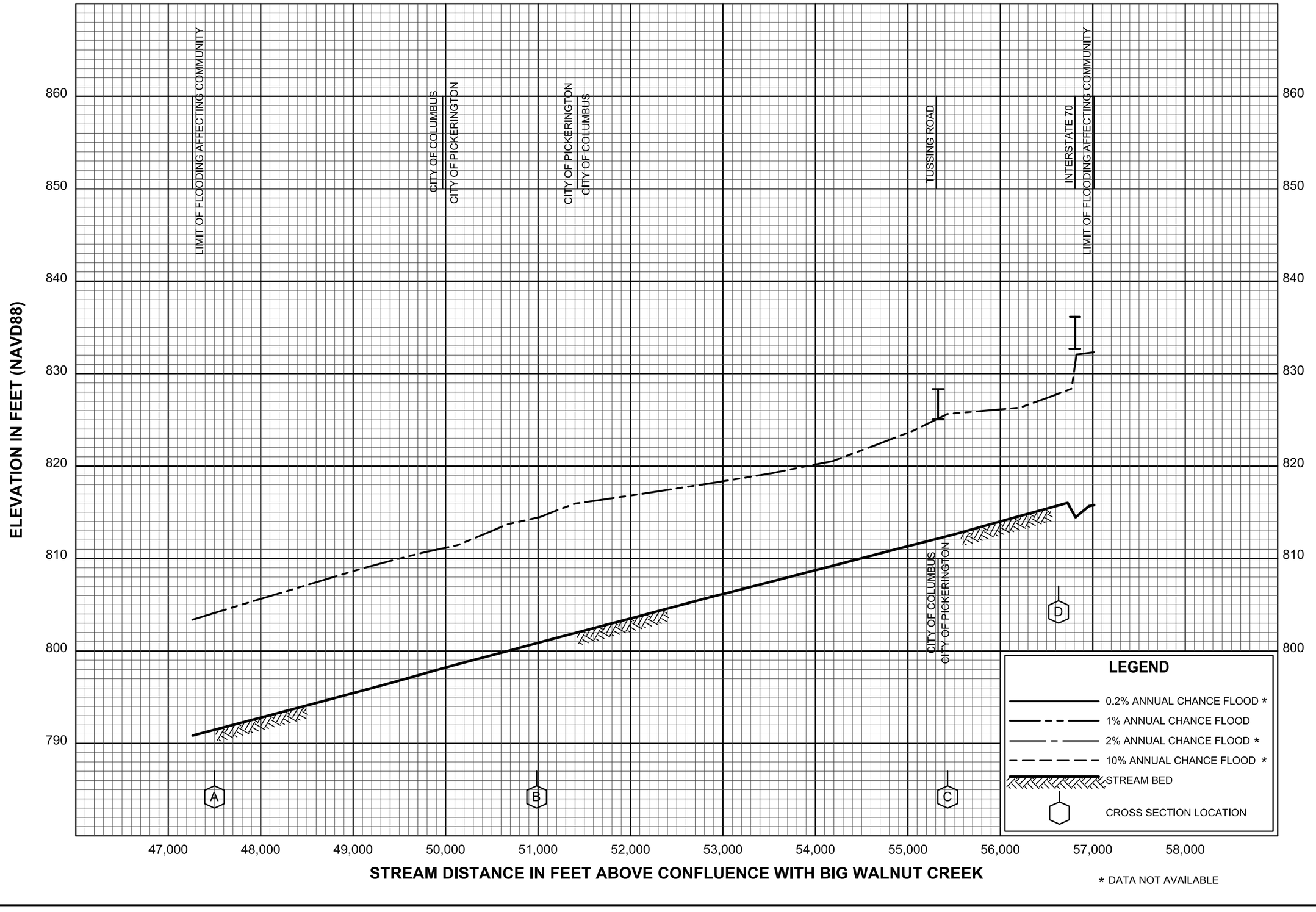
BALTIMORE TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

002P



FLOOD PROFILES

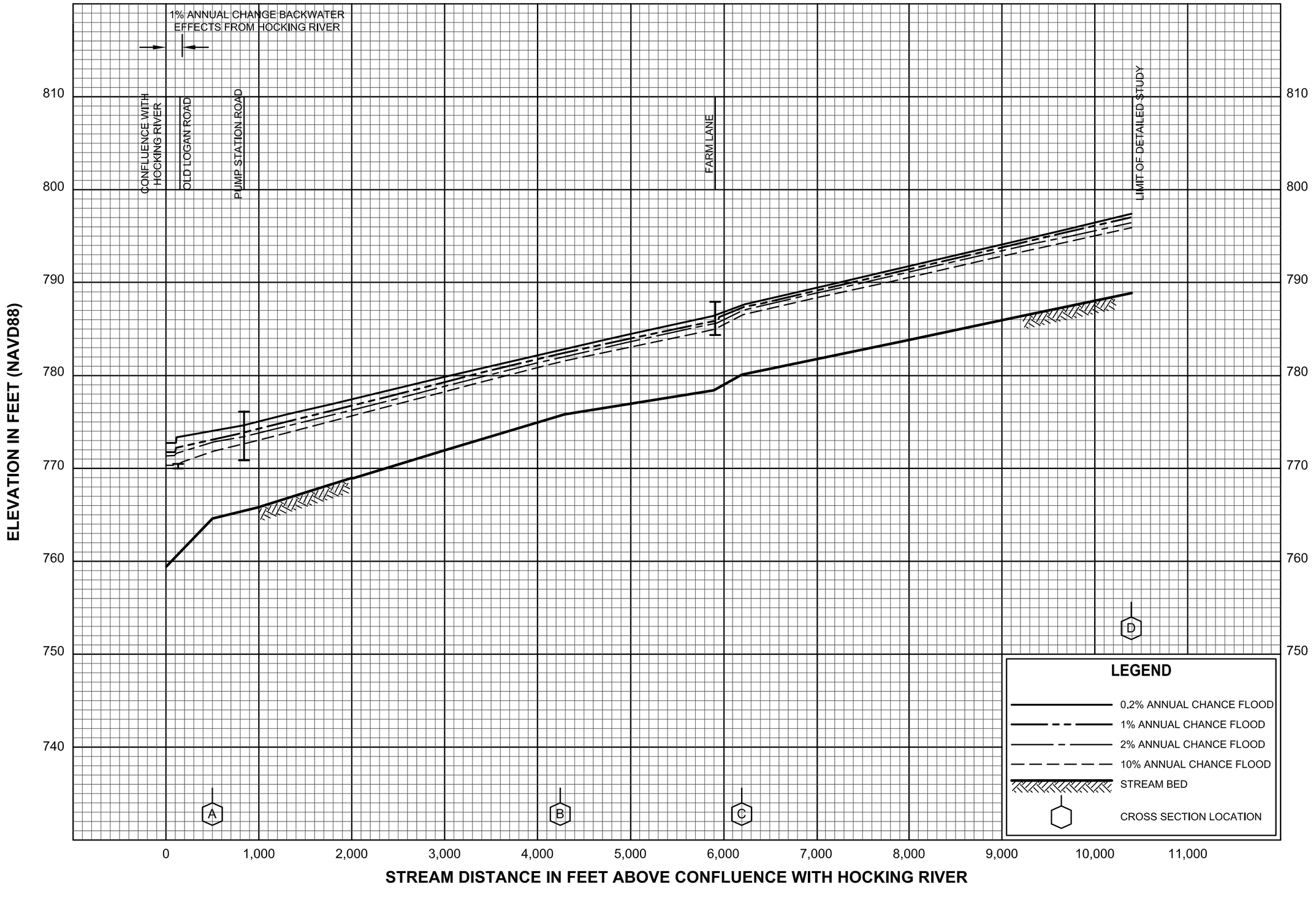
BLACKLICK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

003P



FLOOD PROFILES

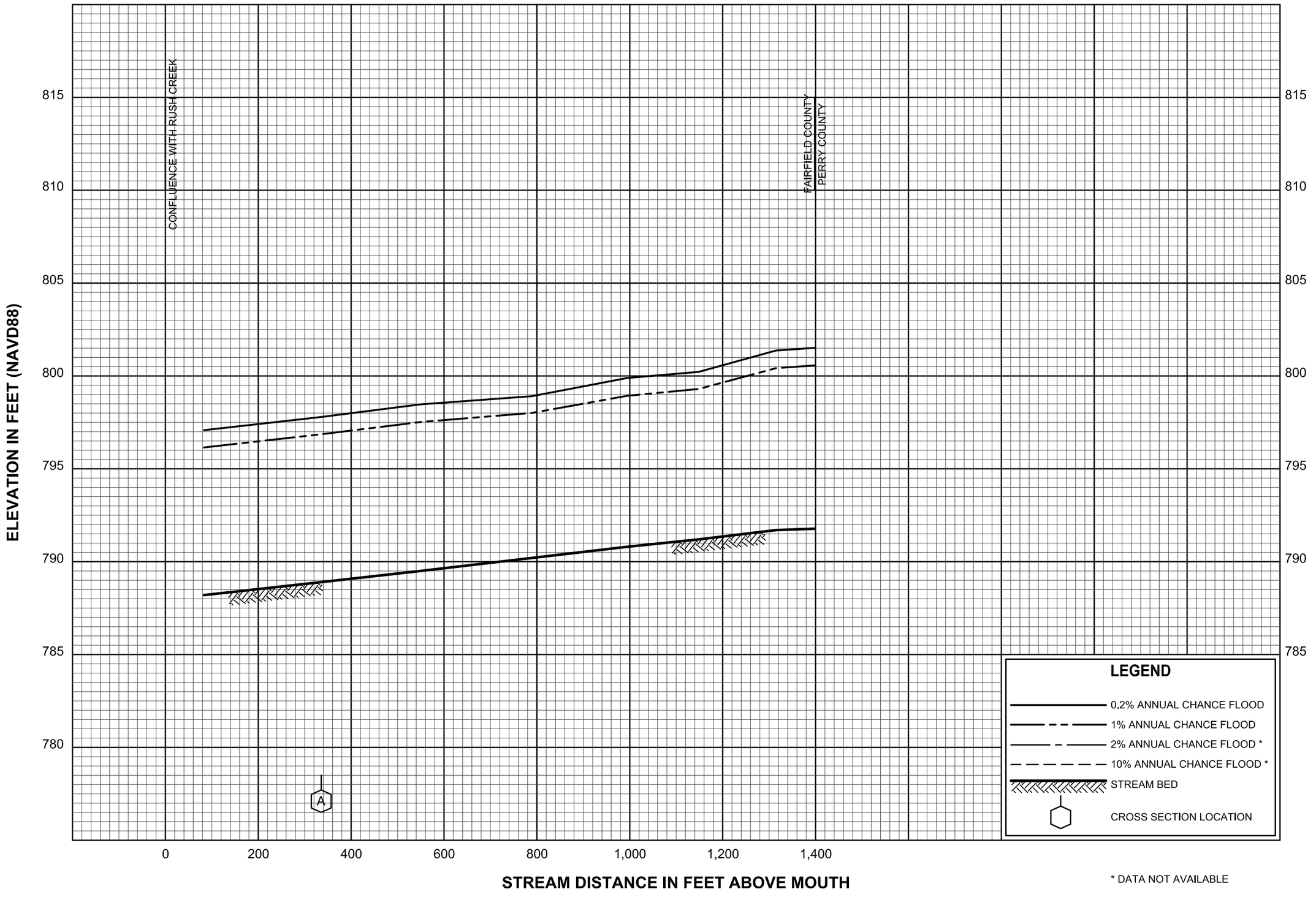
BLUE VALLEY LATERAL

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

004P



FLOOD PROFILES

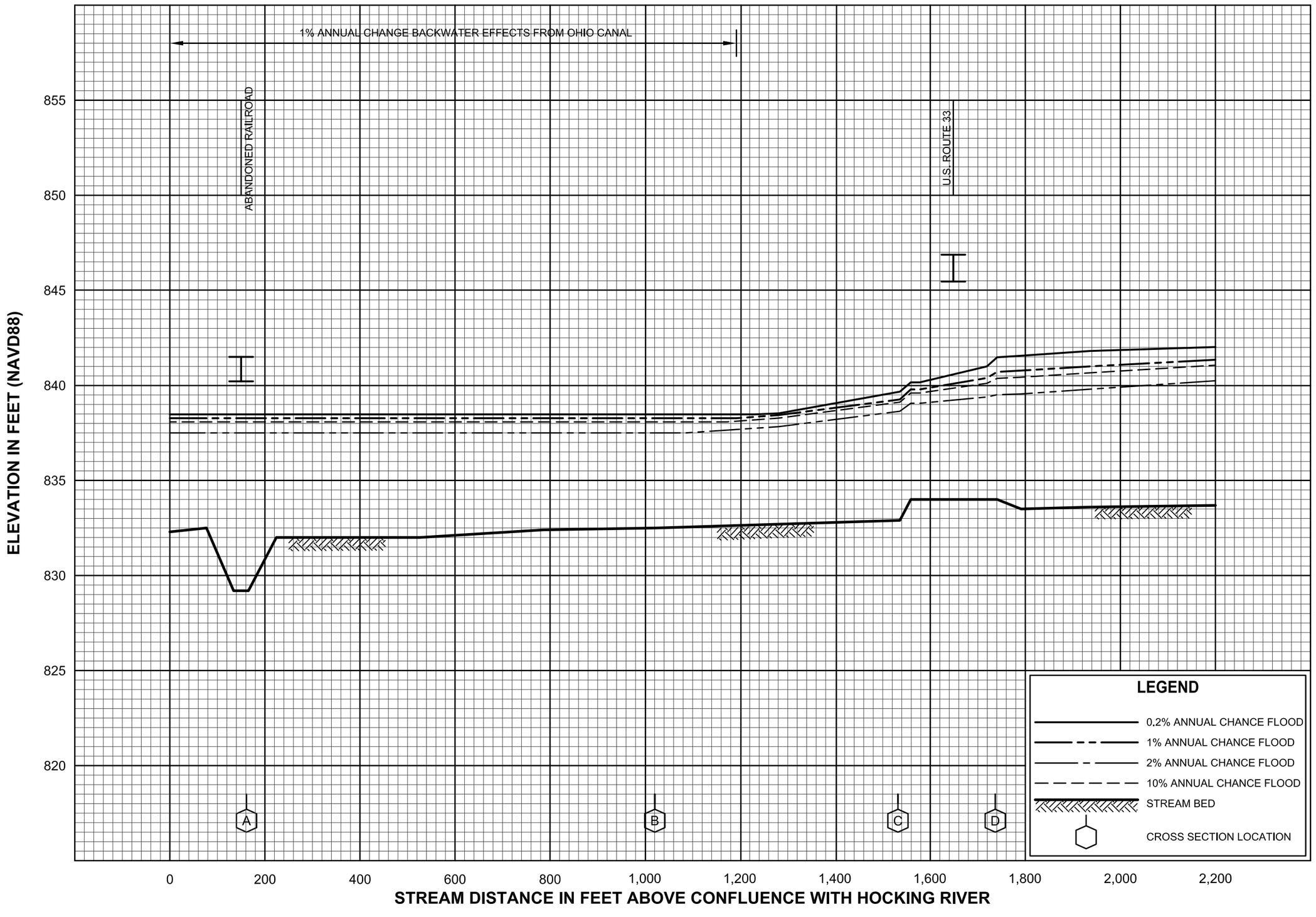
CLARK RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

005P



FLOOD PROFILES

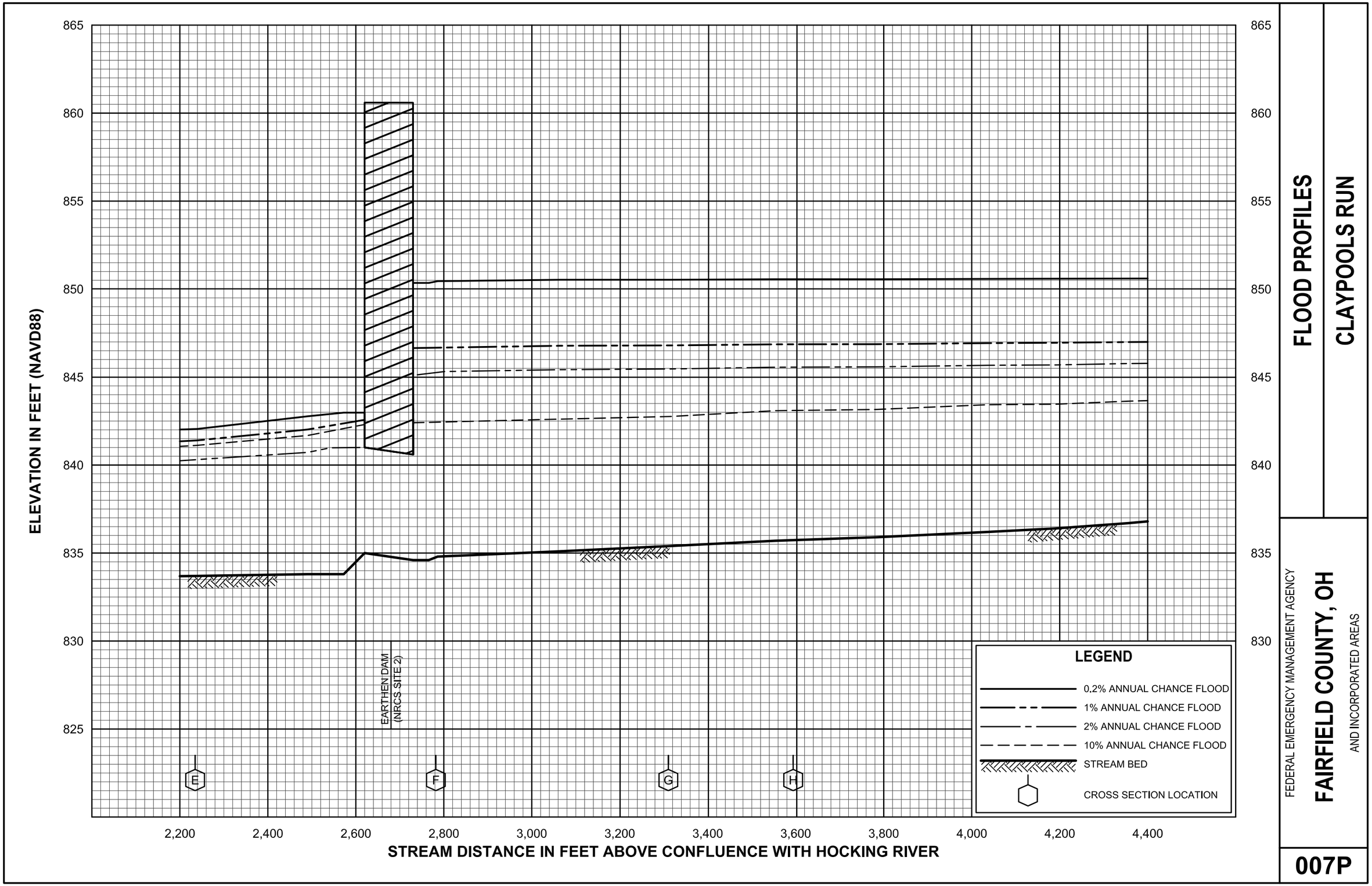
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

006P



FLOOD PROFILES

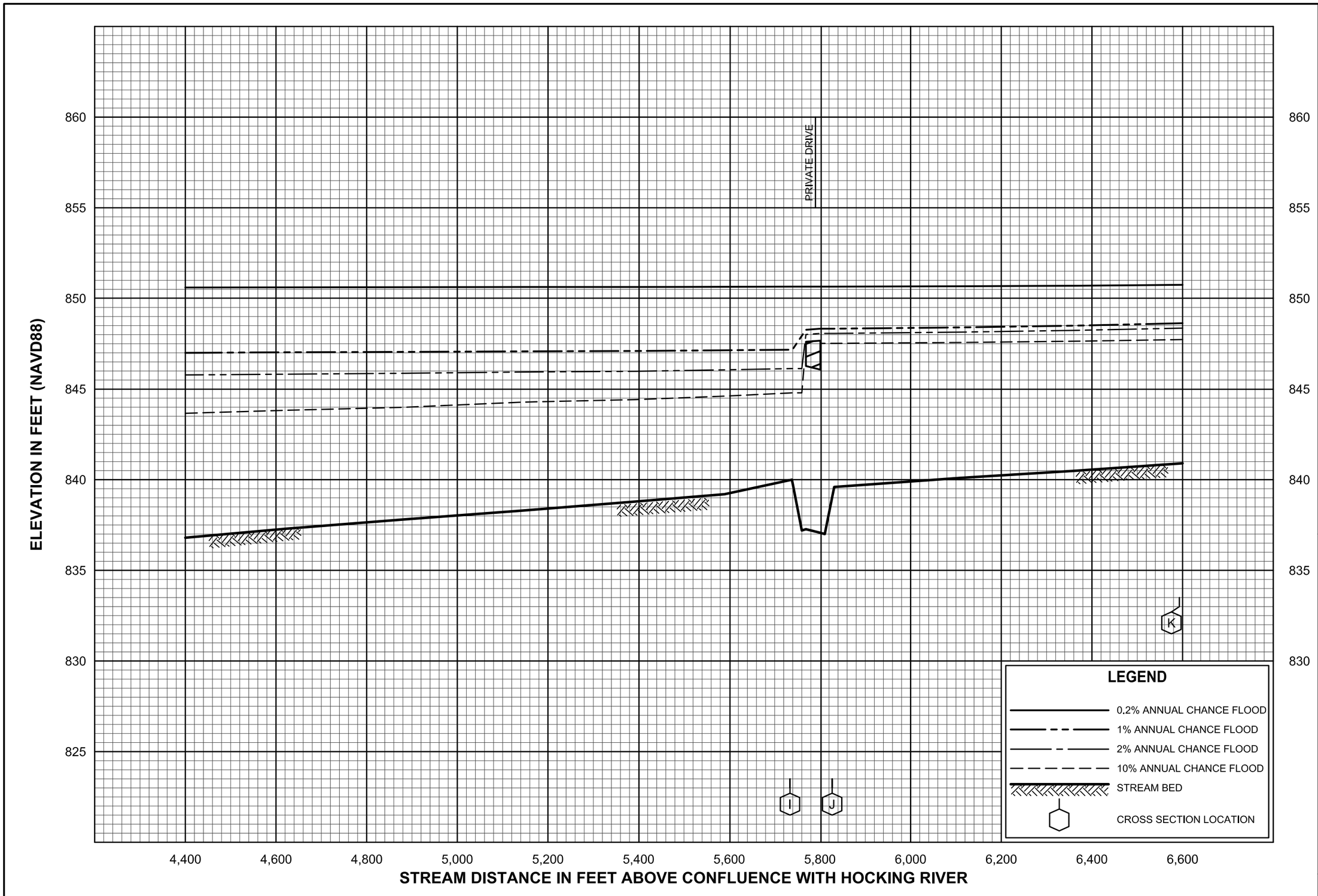
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

007P



FLOOD PROFILES

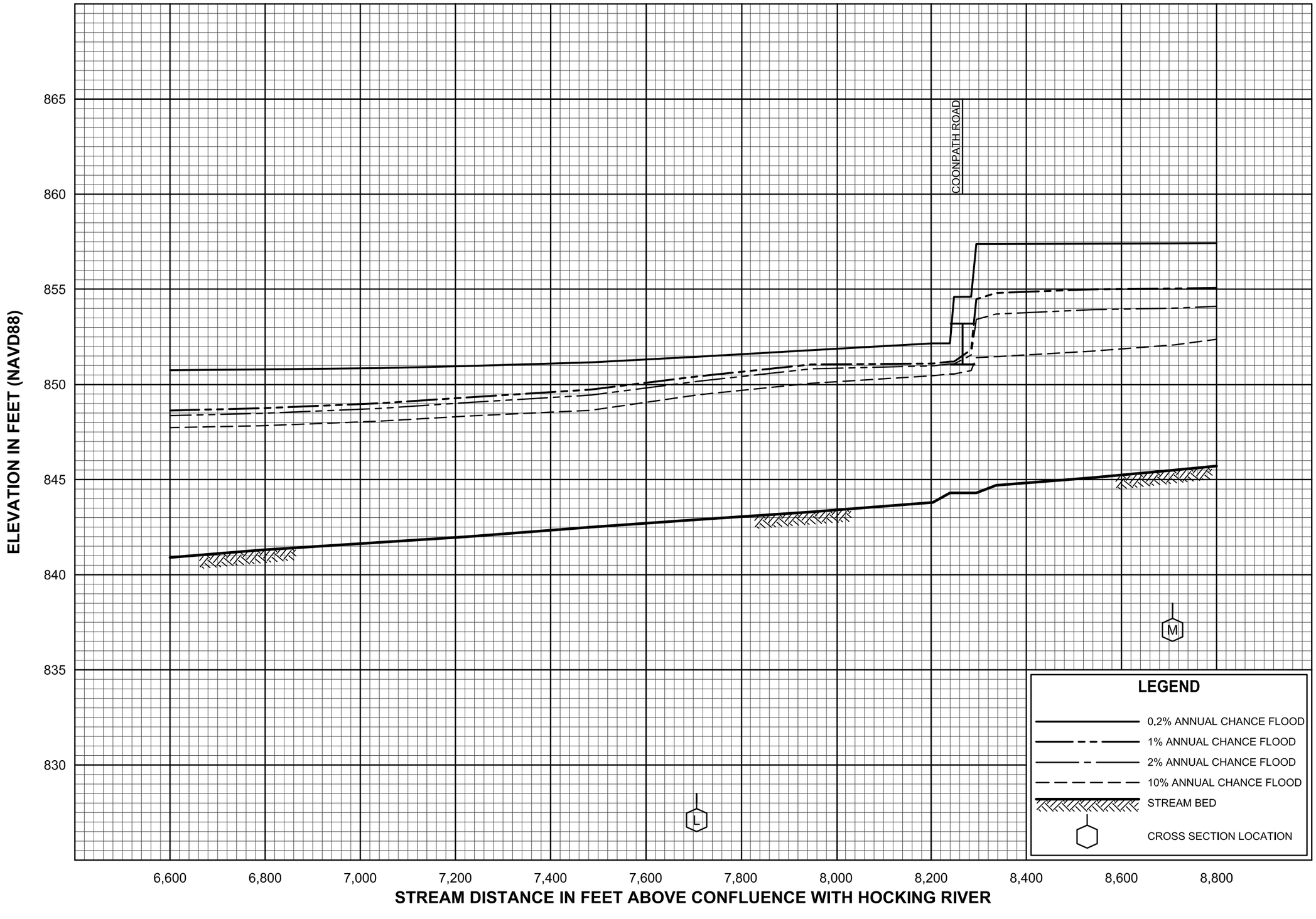
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

008P



FLOOD PROFILES

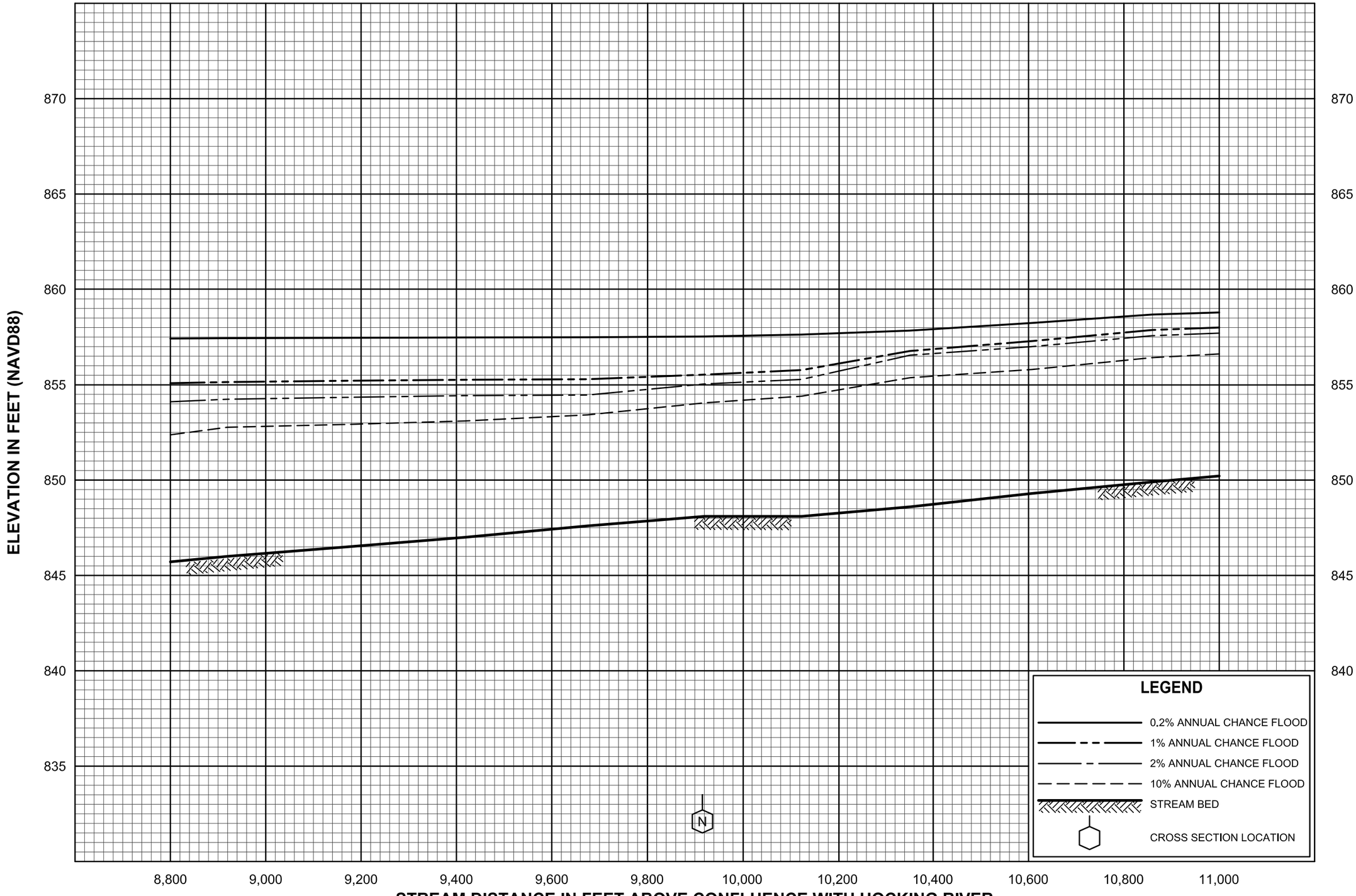
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

009P



FLOOD PROFILES

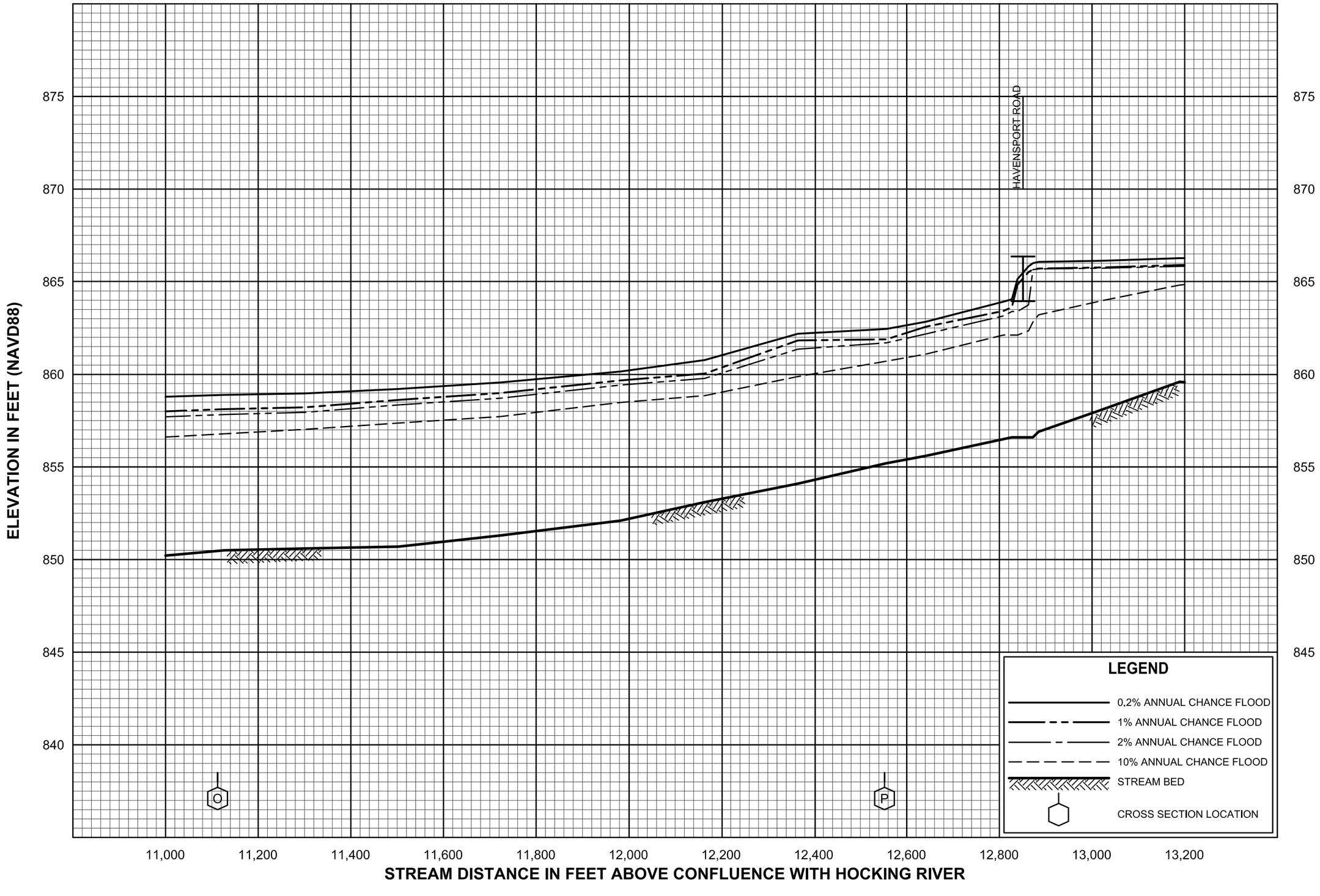
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

010P



FLOOD PROFILES

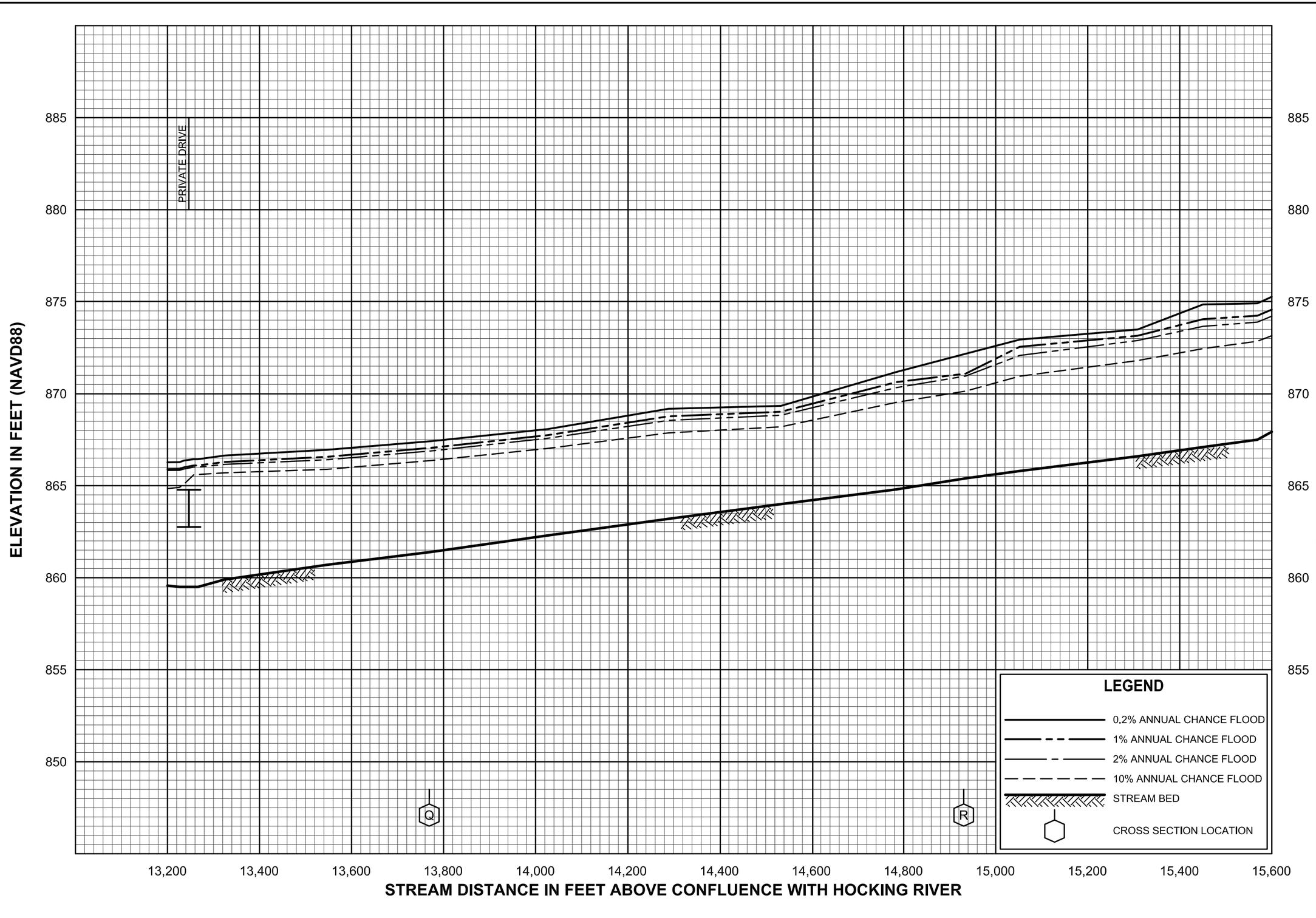
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

011P



FLOOD PROFILES

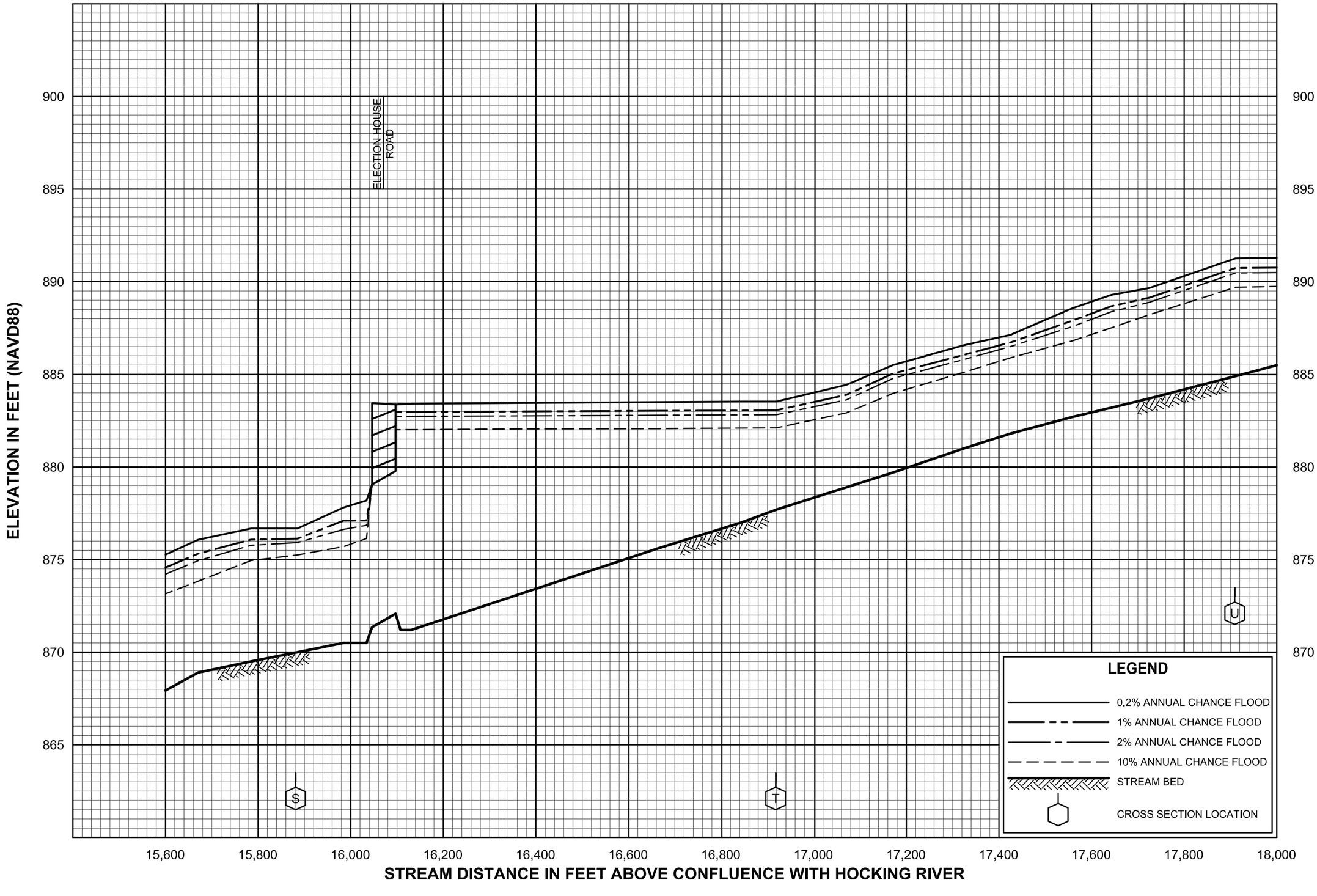
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

012P



FLOOD PROFILES

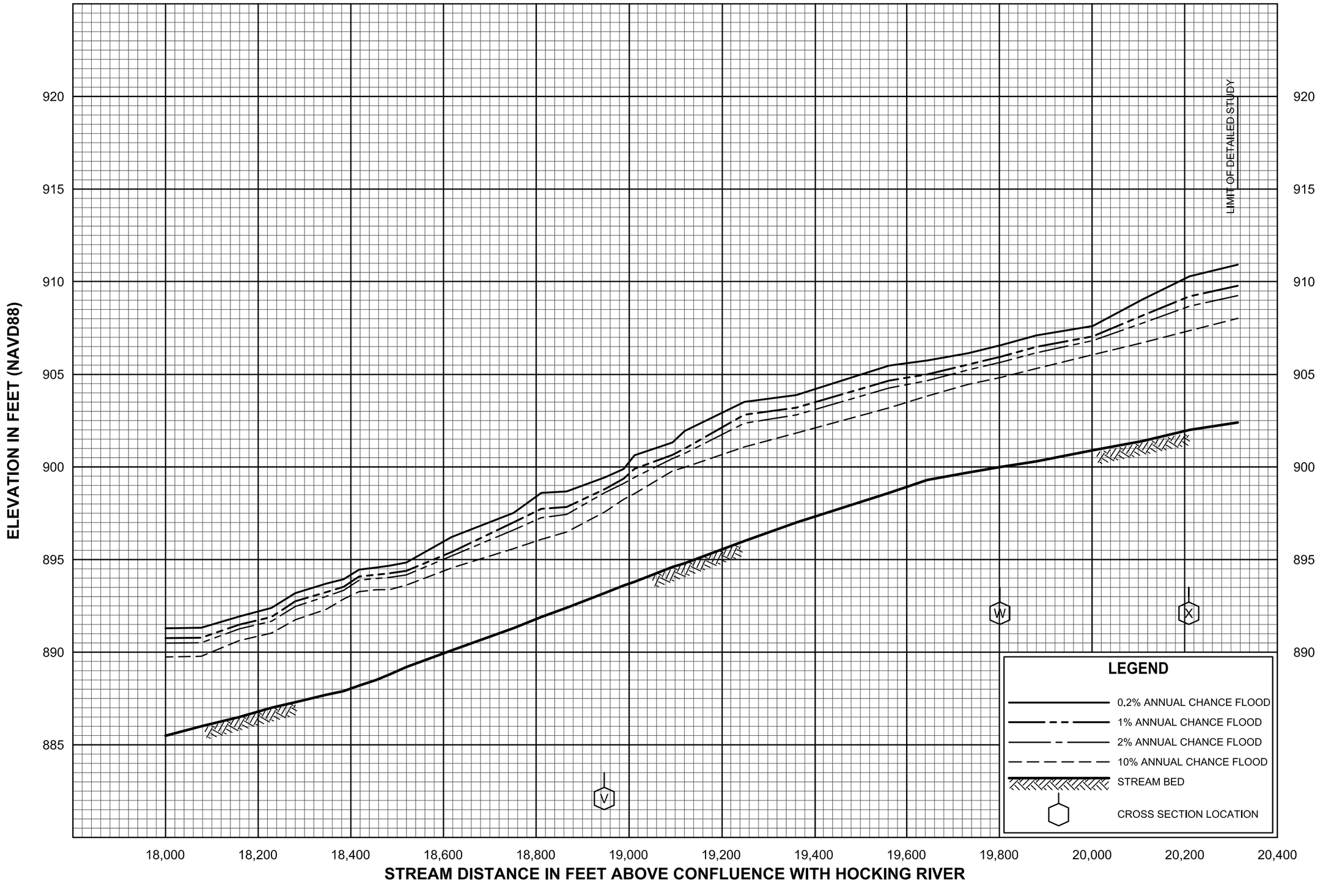
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

013P



FLOOD PROFILES

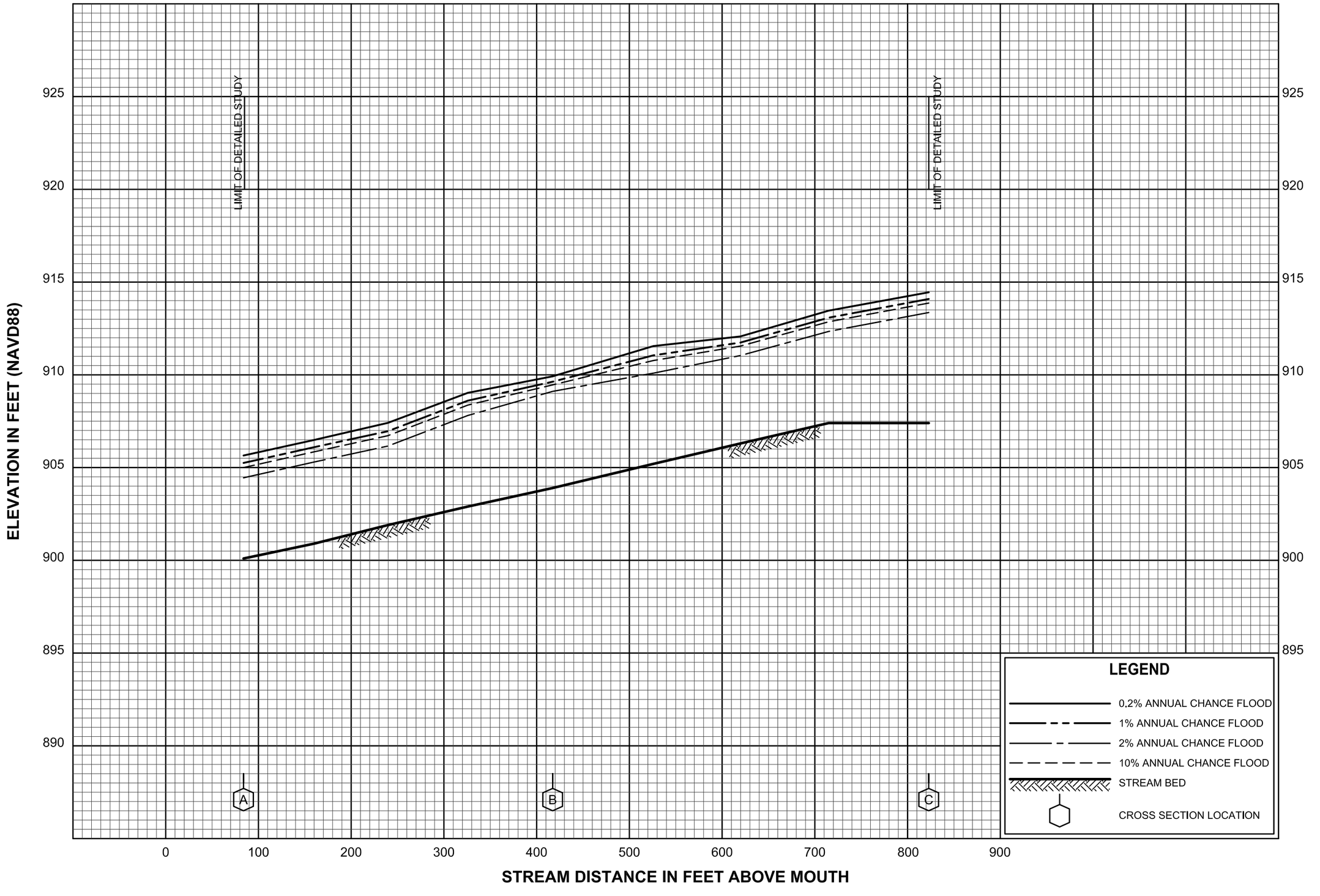
CLAYPOOLS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

014P



FLOOD PROFILES

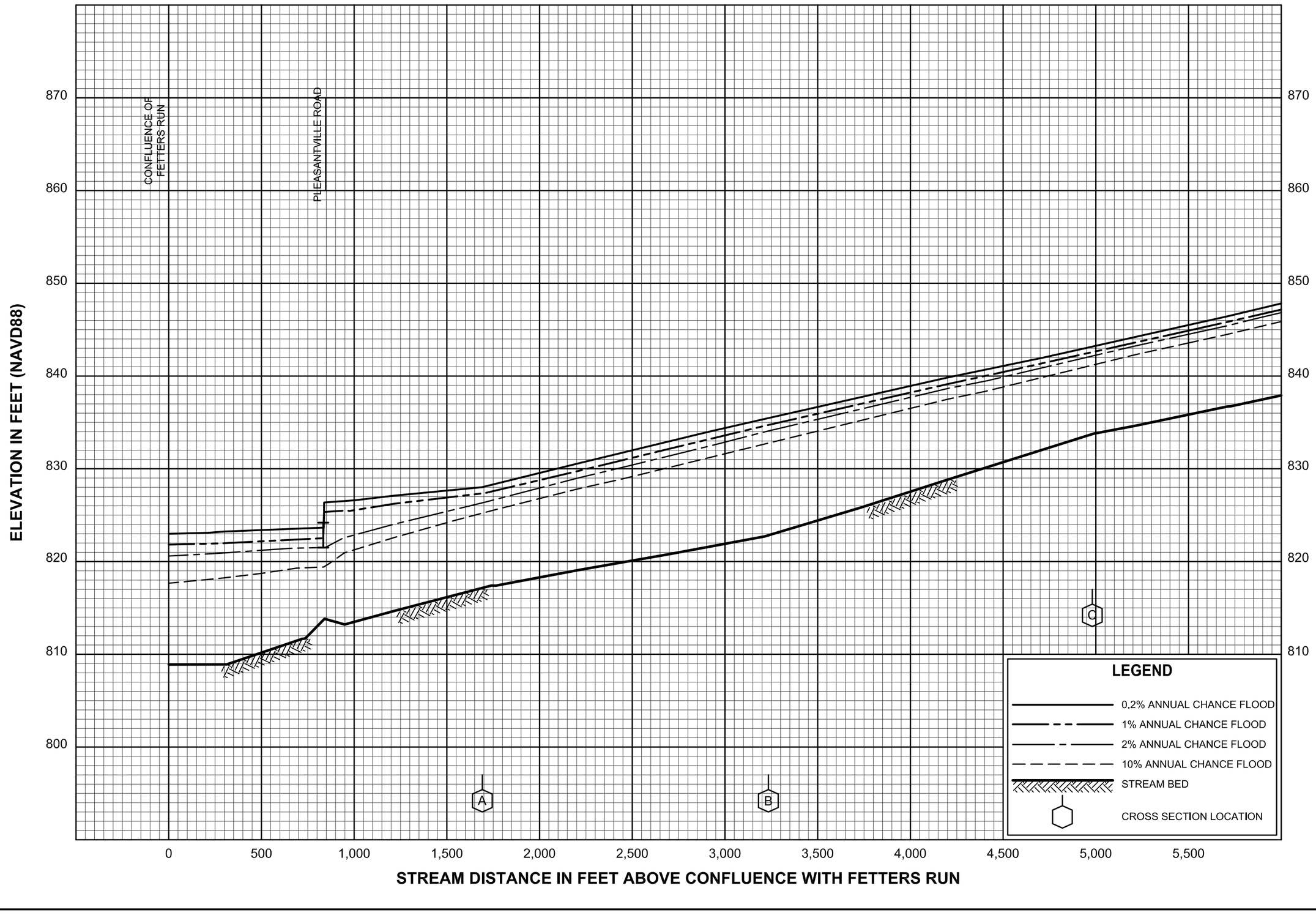
CRUMLEY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

015P



FLOOD PROFILES

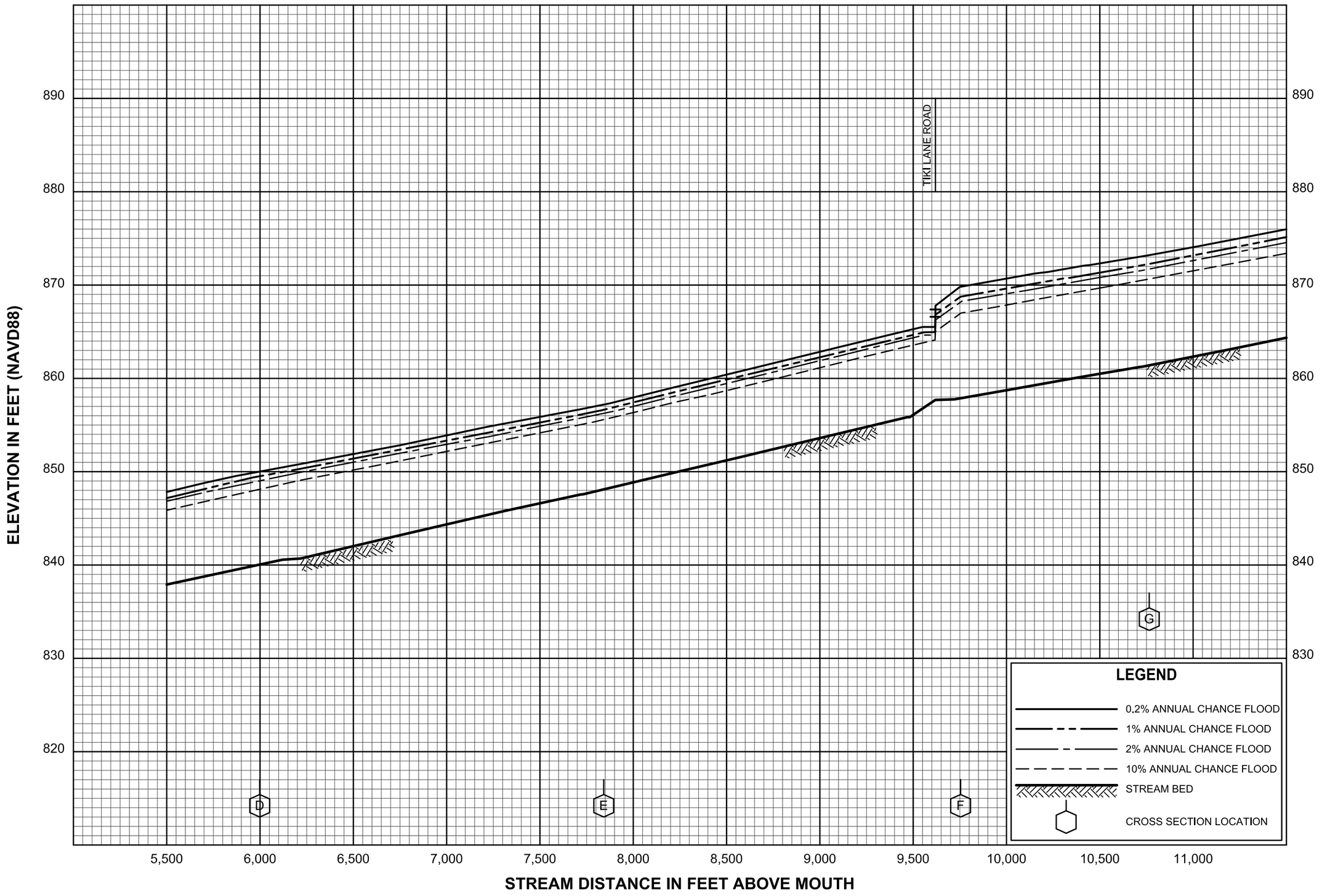
EWING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

016P



FLOOD PROFILES

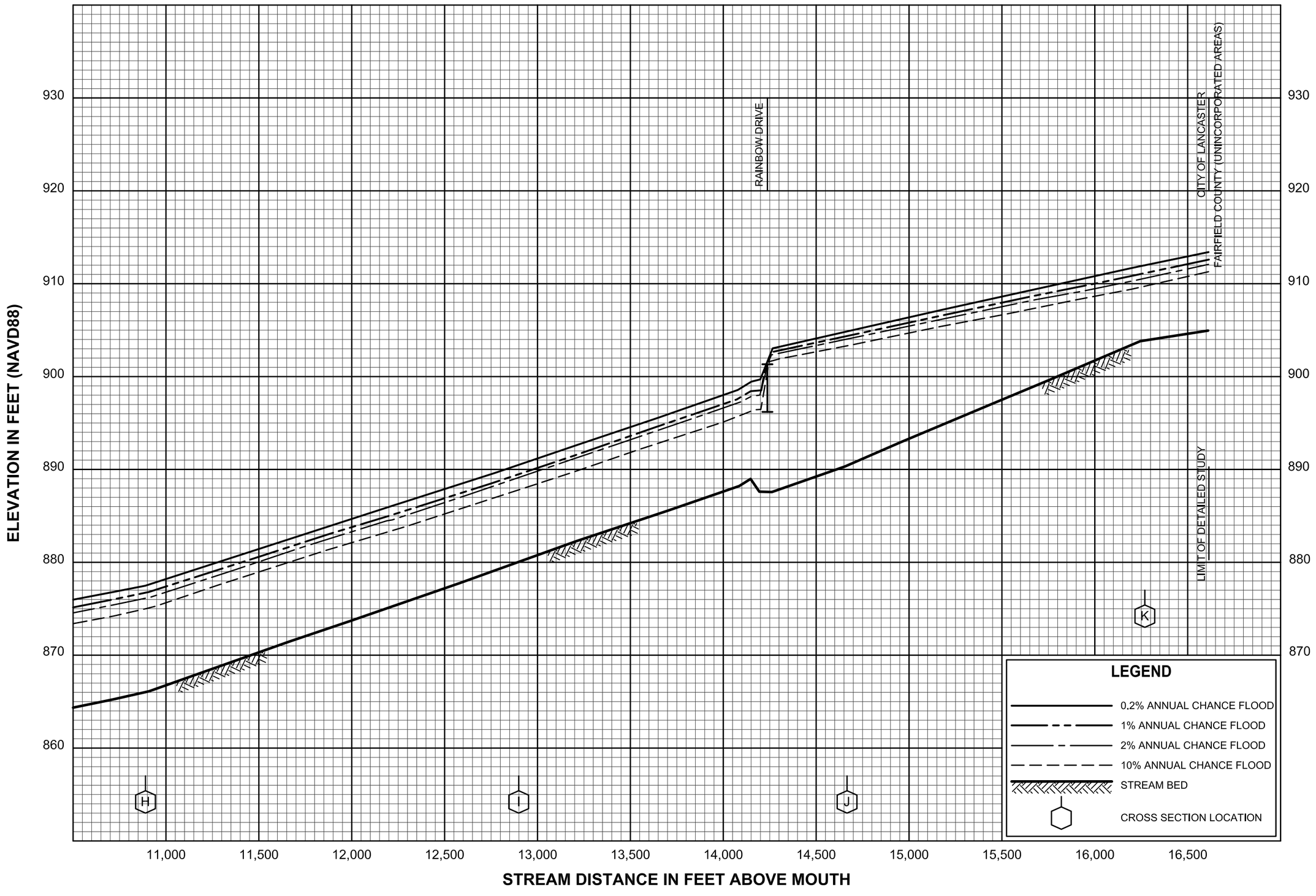
EWING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

017P



FLOOD PROFILES

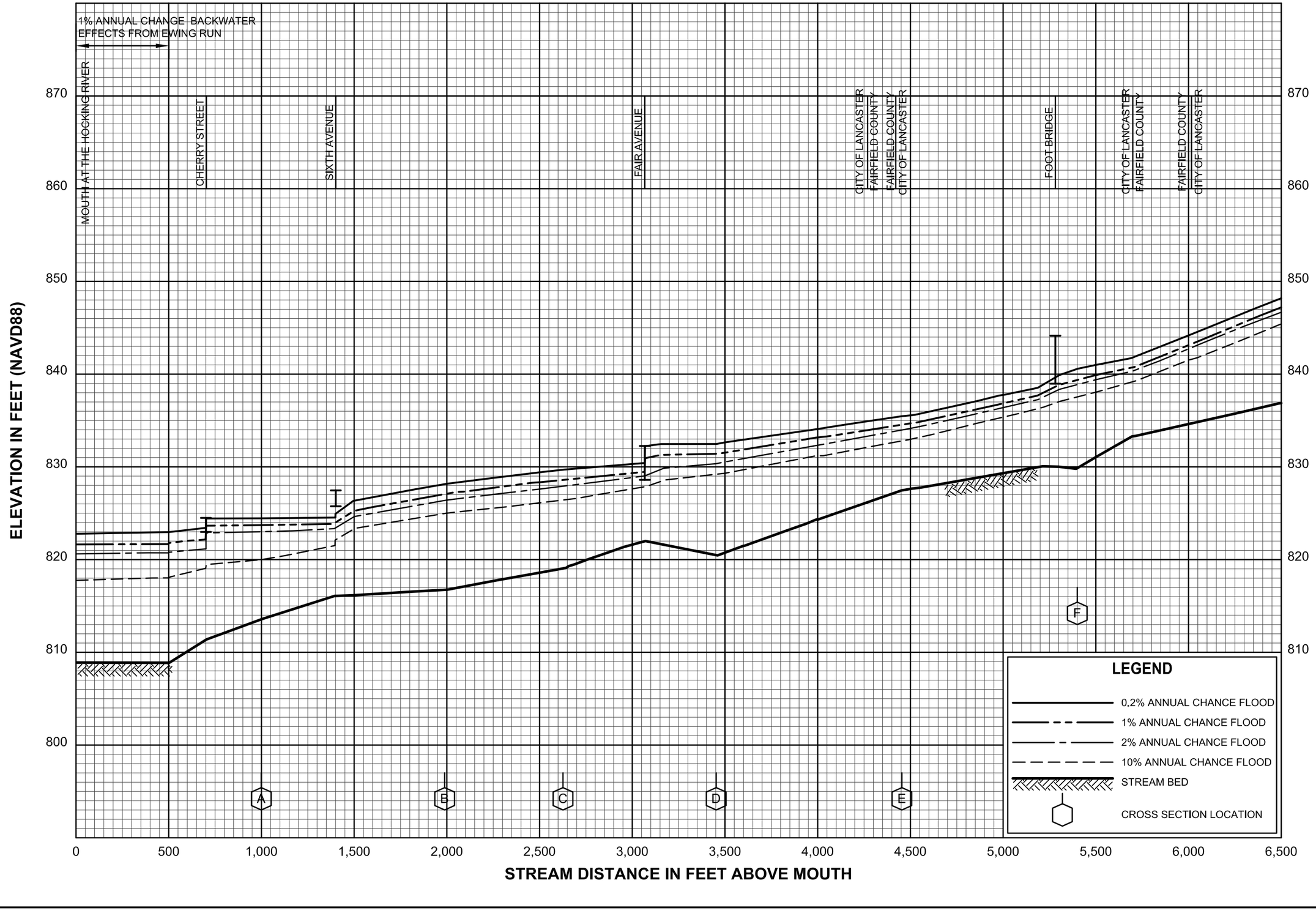
EWING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

018P



FLOOD PROFILES

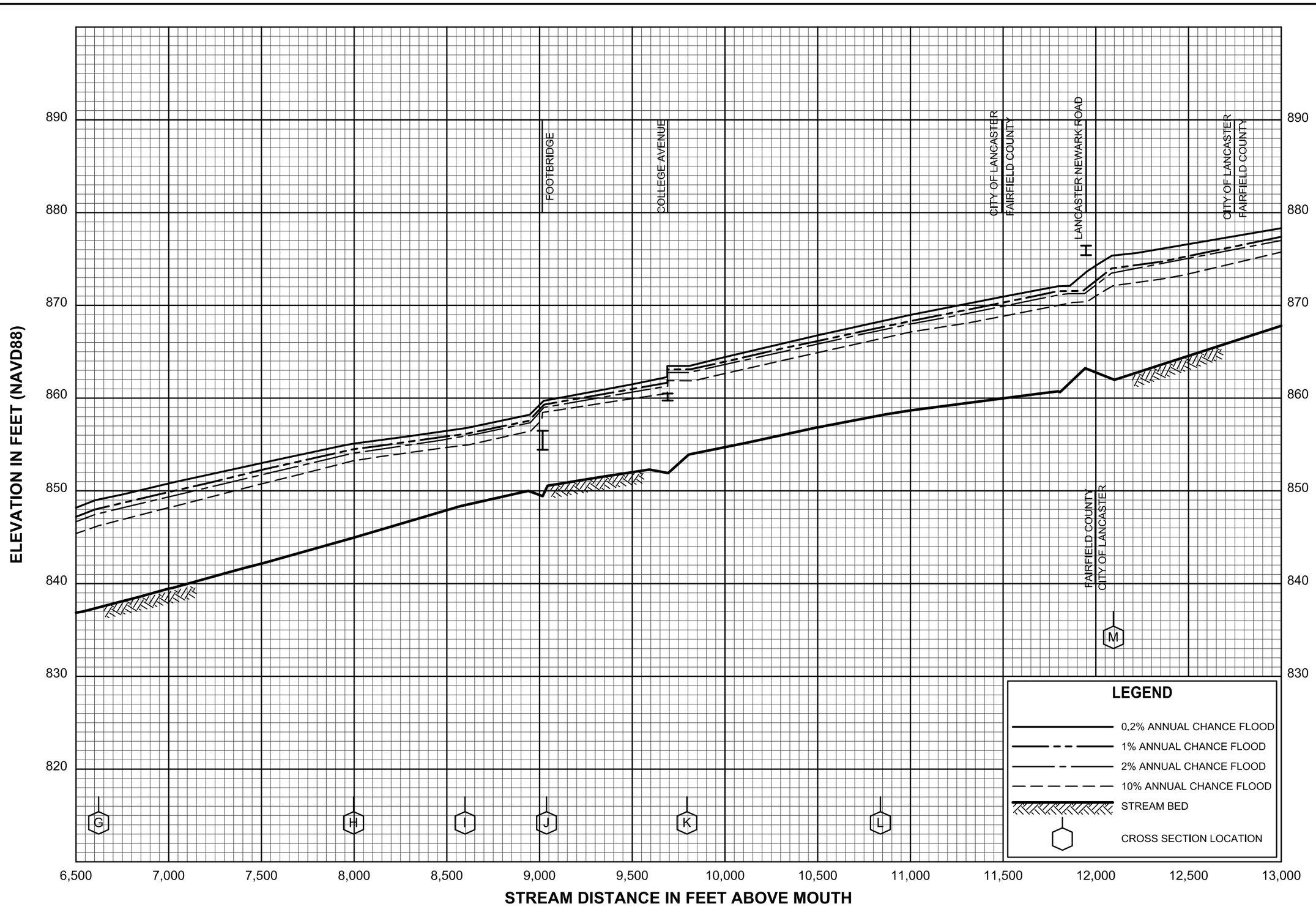
FETTERS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

019P



FLOOD PROFILES

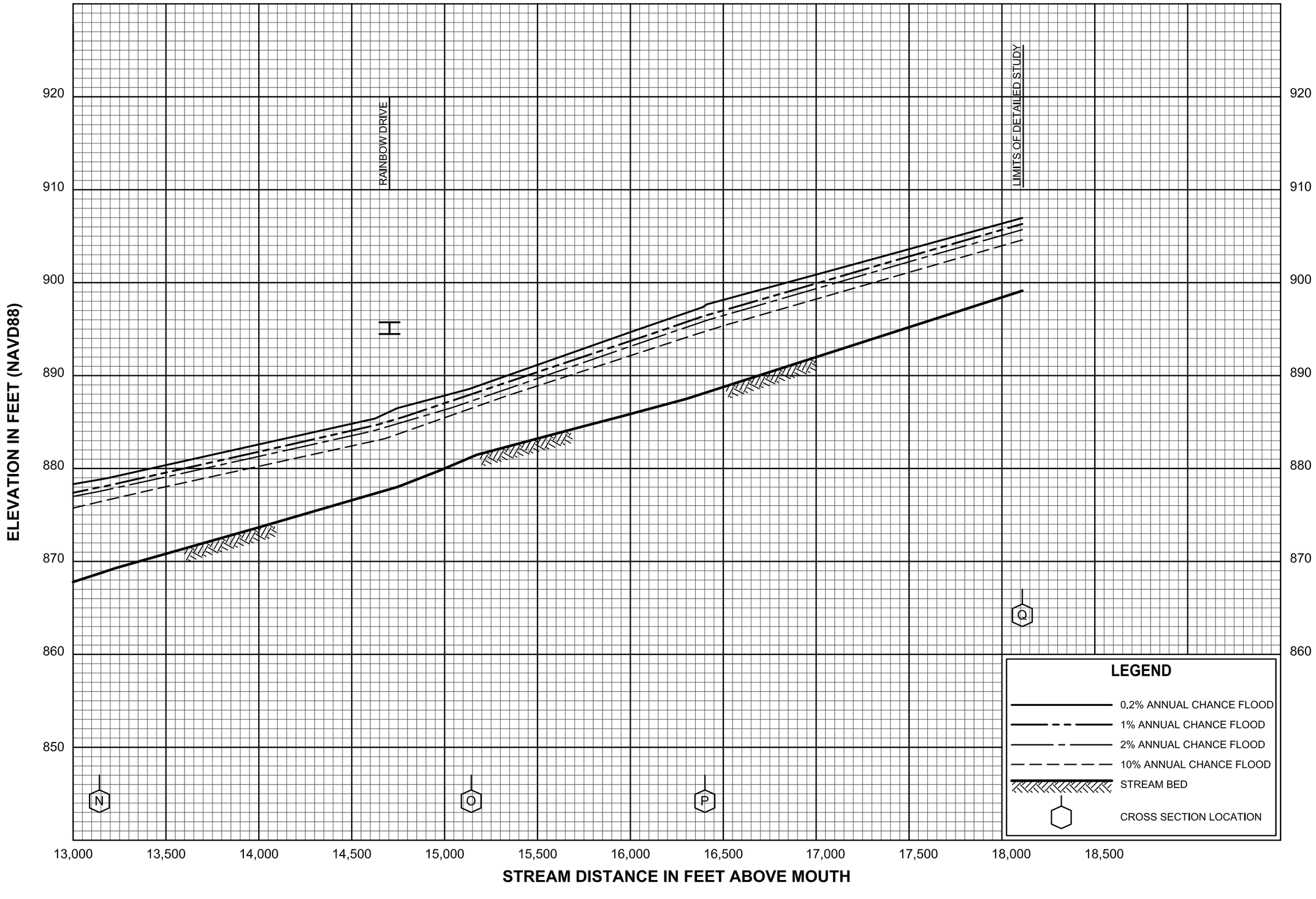
FETTERS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

020P



FLOOD PROFILES

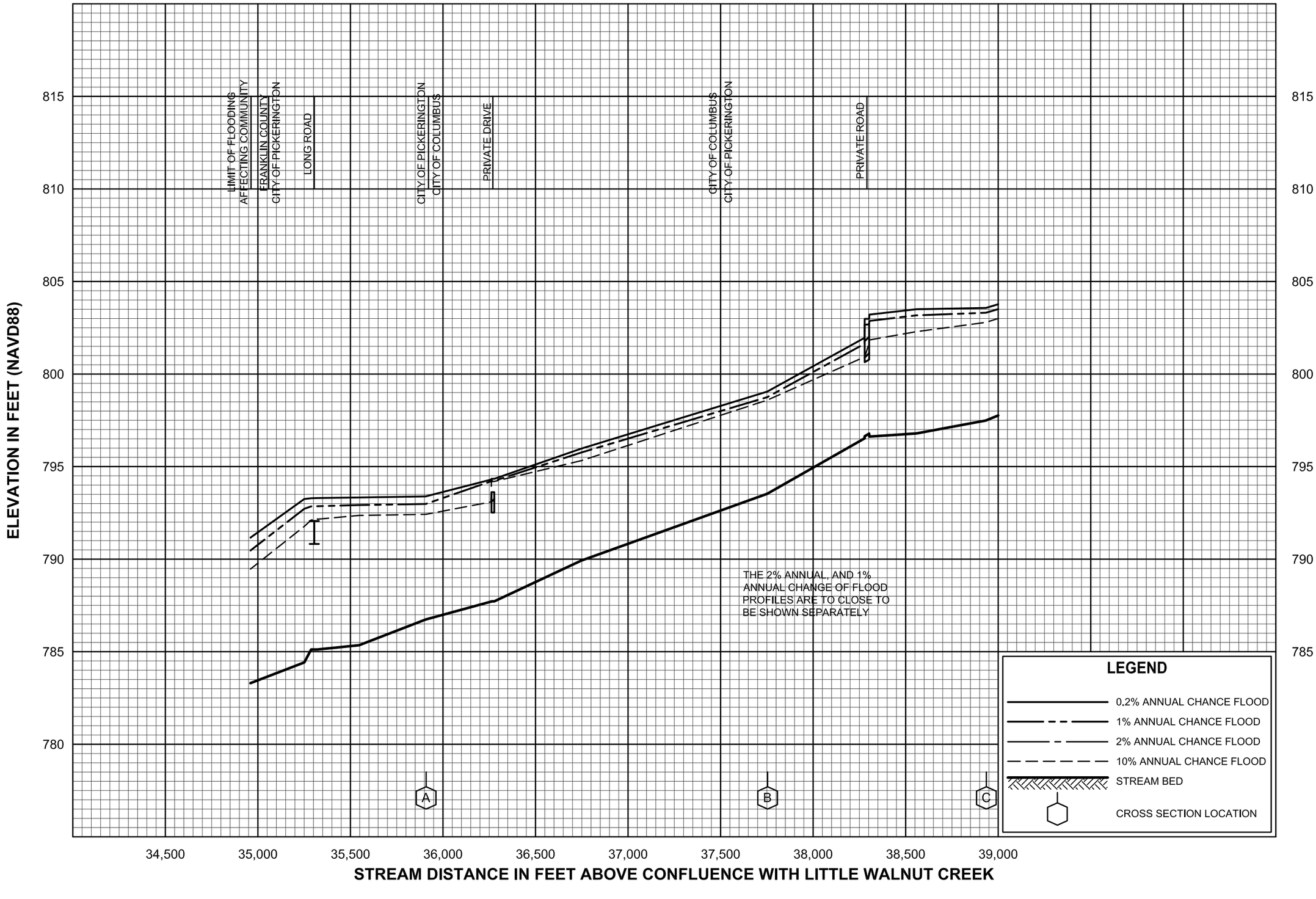
FETTERS RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

021P



FLOOD PROFILES

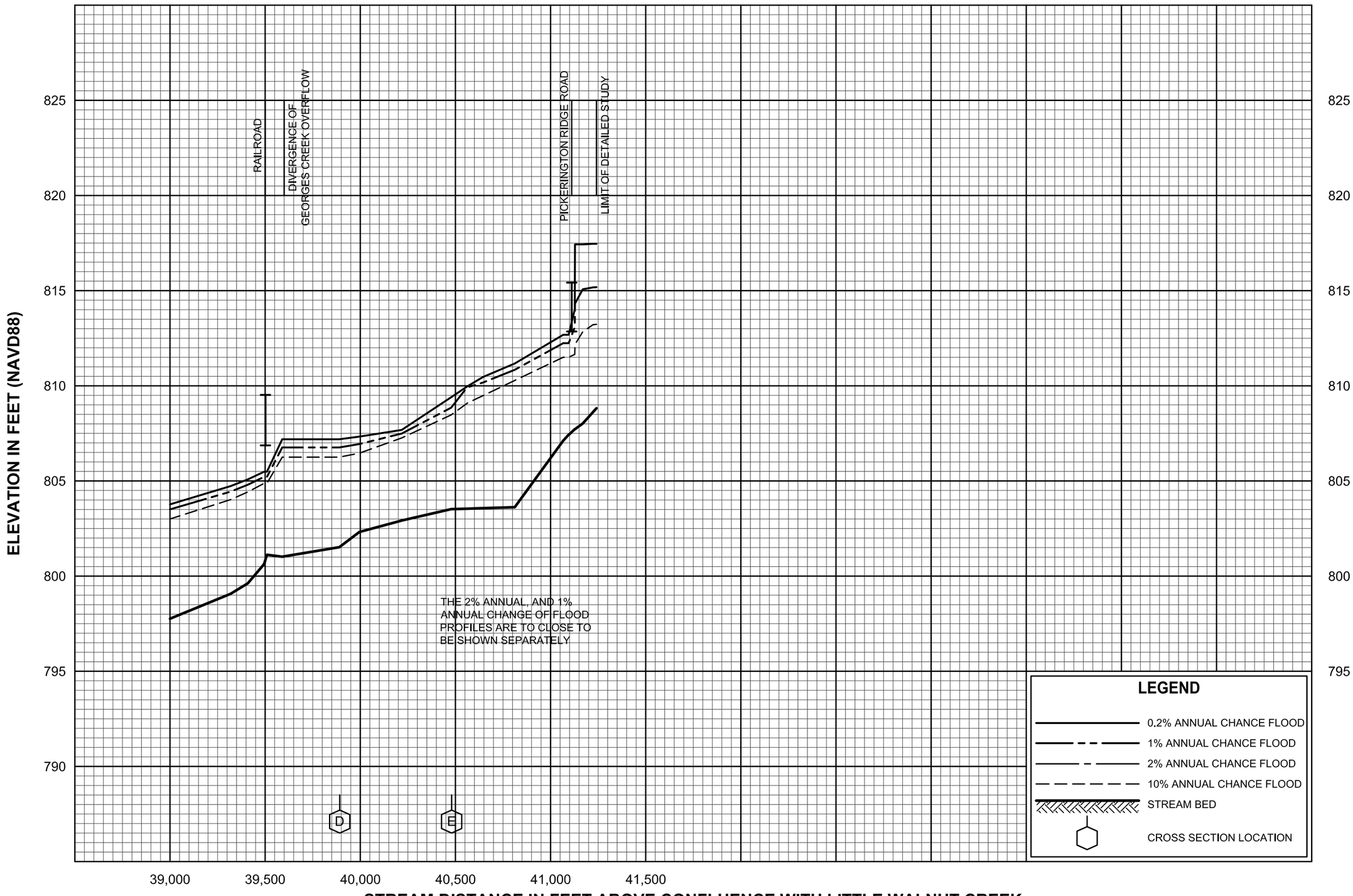
GEORGES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

022P



FLOOD PROFILES

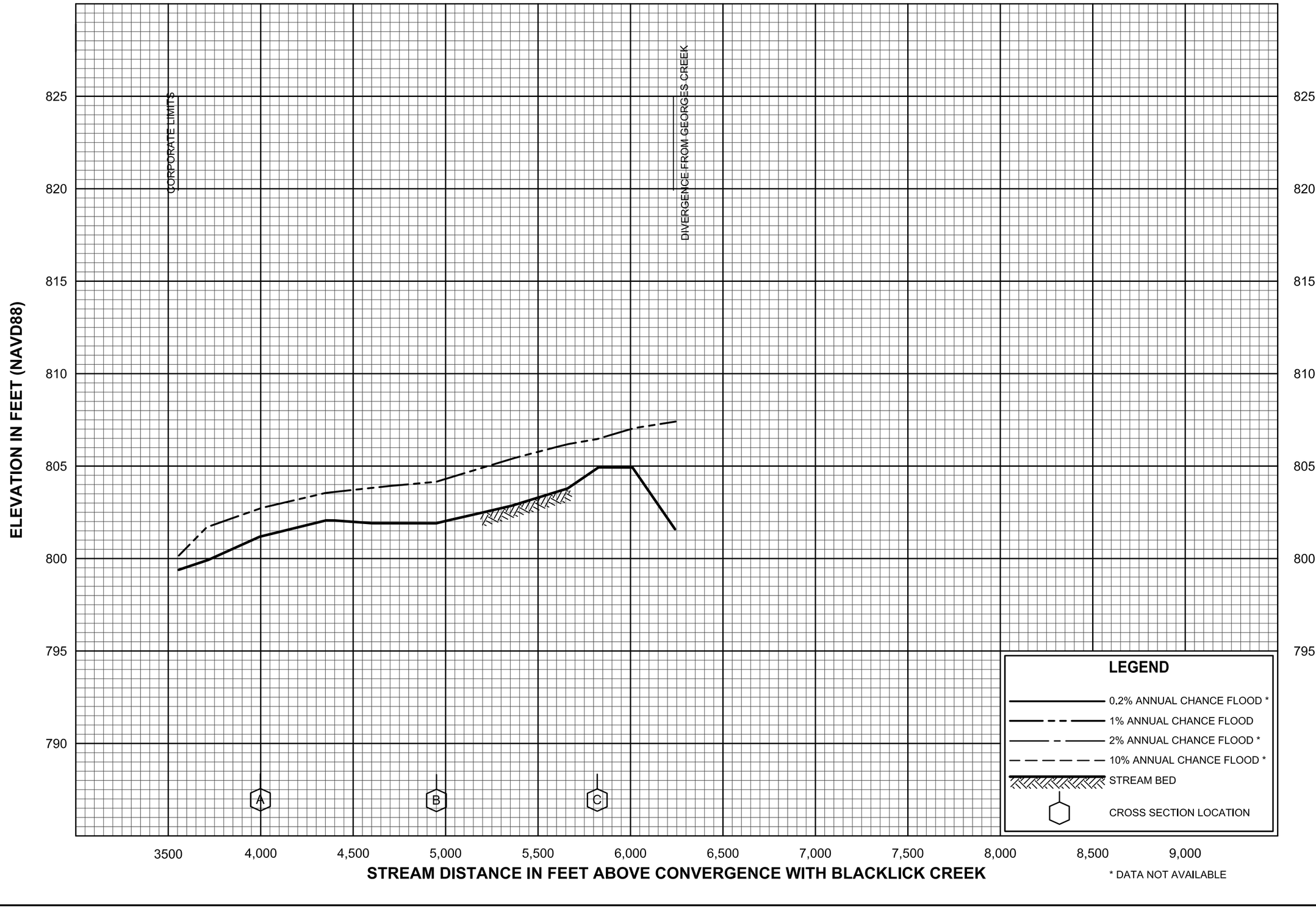
GEORGES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

023P



FLOOD PROFILES

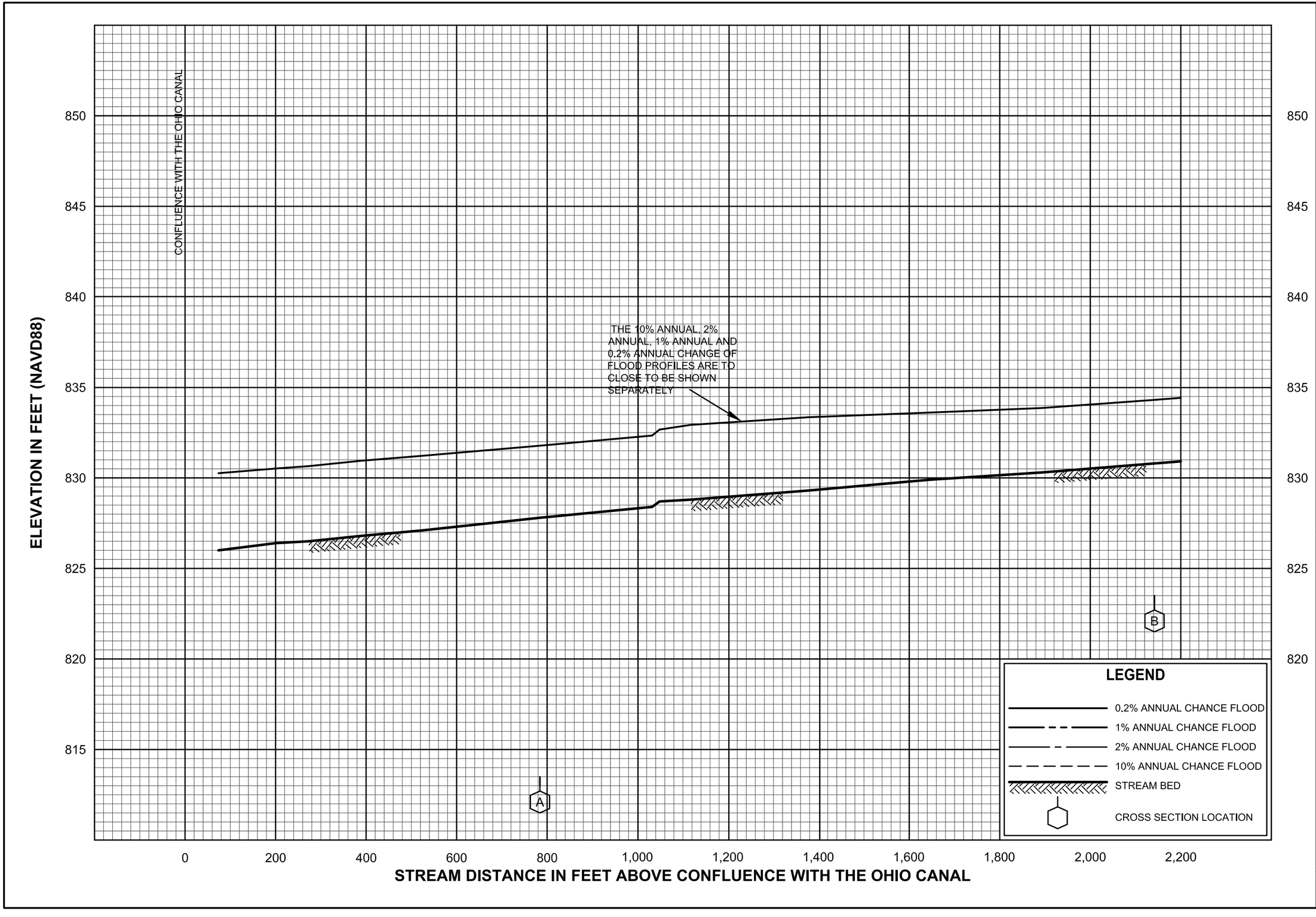
GEORGES CREEK OVERFLOW

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

024P



FLOOD PROFILES

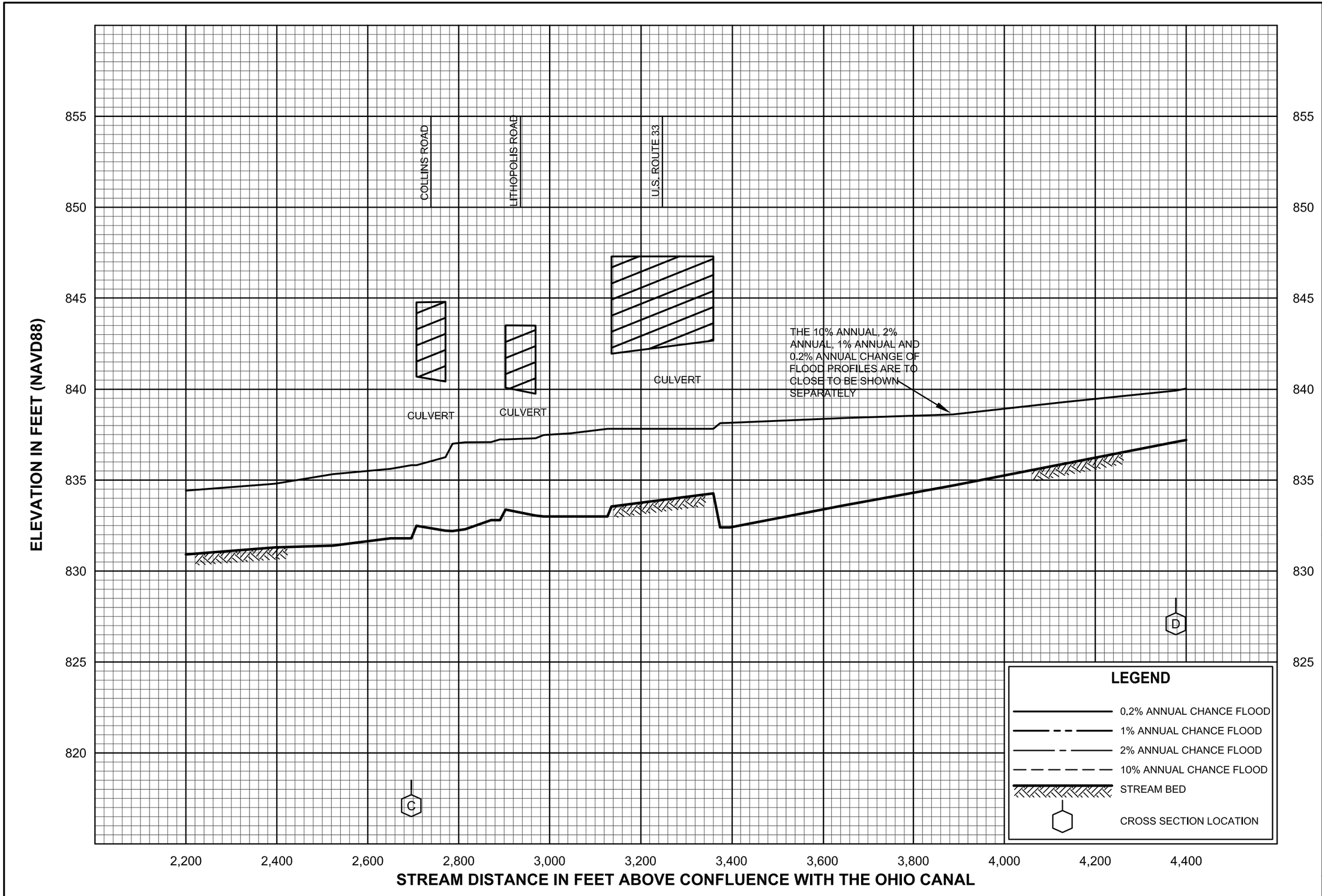
GREENFIELD CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

025P



FLOOD PROFILES

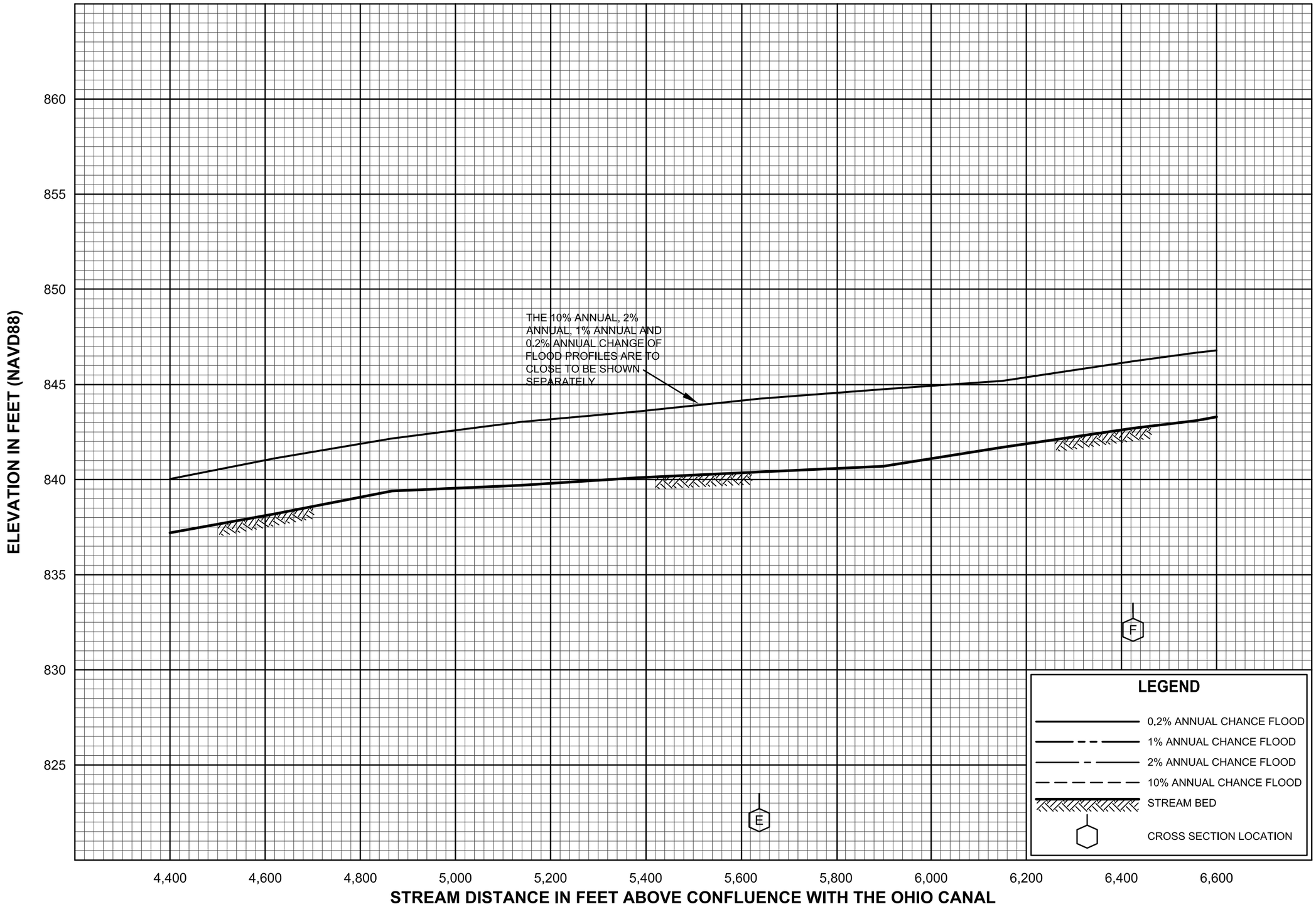
GREENFIELD CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

026P



FLOOD PROFILES

GREENFIELD CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

027P

ELEVATION IN FEET (NAVD88)

870
865
860
855
850
845
840
835

ANCHOR HOCKING AIRPORT

FARM PATH

CULVERT

THE 10% ANNUAL, 2% ANNUAL, 1% ANNUAL AND 0.2% ANNUAL CHANGE OF FLOOD PROFILES ARE TO CLOSE TO BE SHOWN SEPARATELY

G

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- CROSS SECTION LOCATION

6,600 6,800 7,000 7,200 7,400 7,600 7,800 8,000 8,200 8,400 8,600 8,800

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH THE OHIO CANAL

FLOOD PROFILES

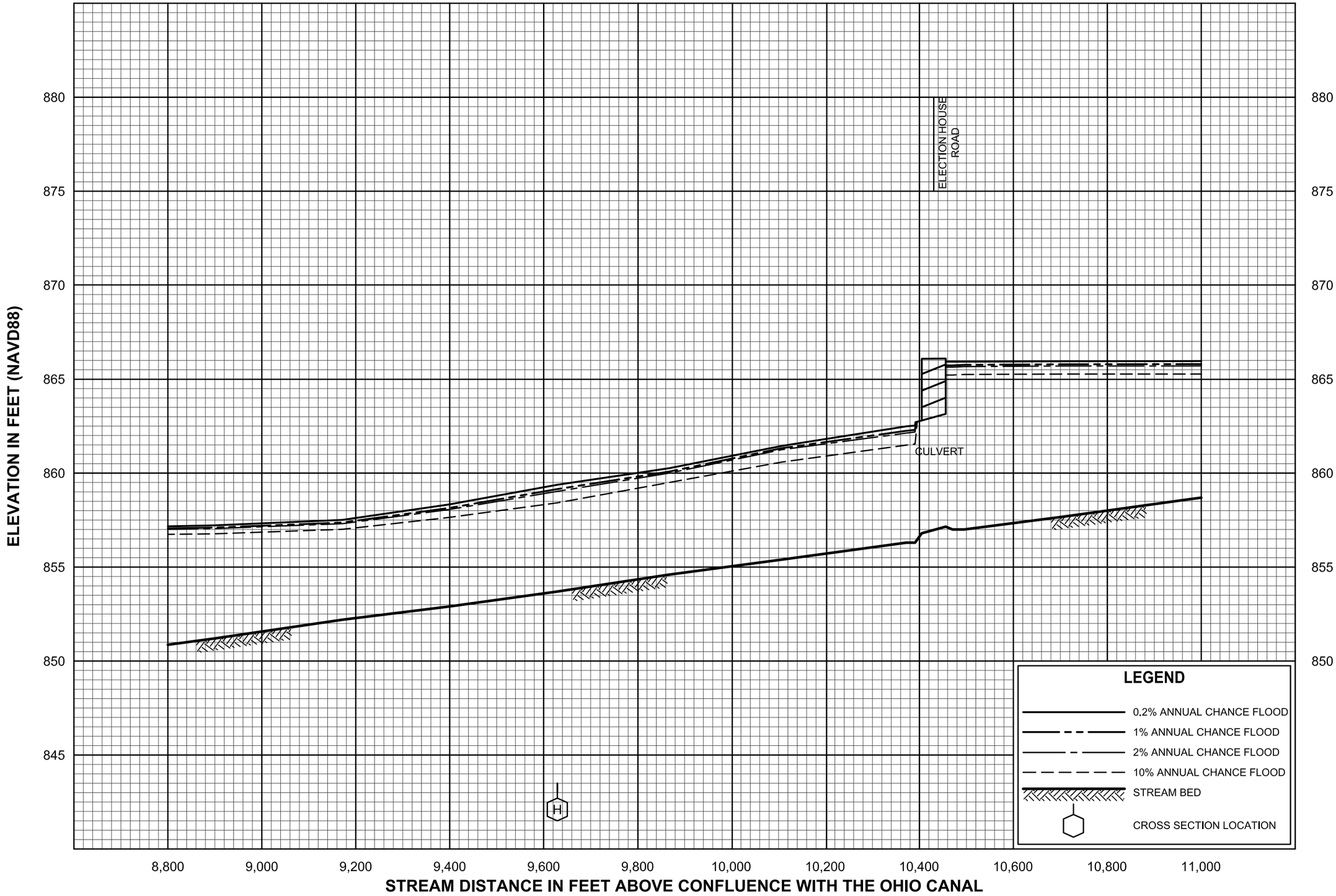
GREENFIELD CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

028P



FLOOD PROFILES

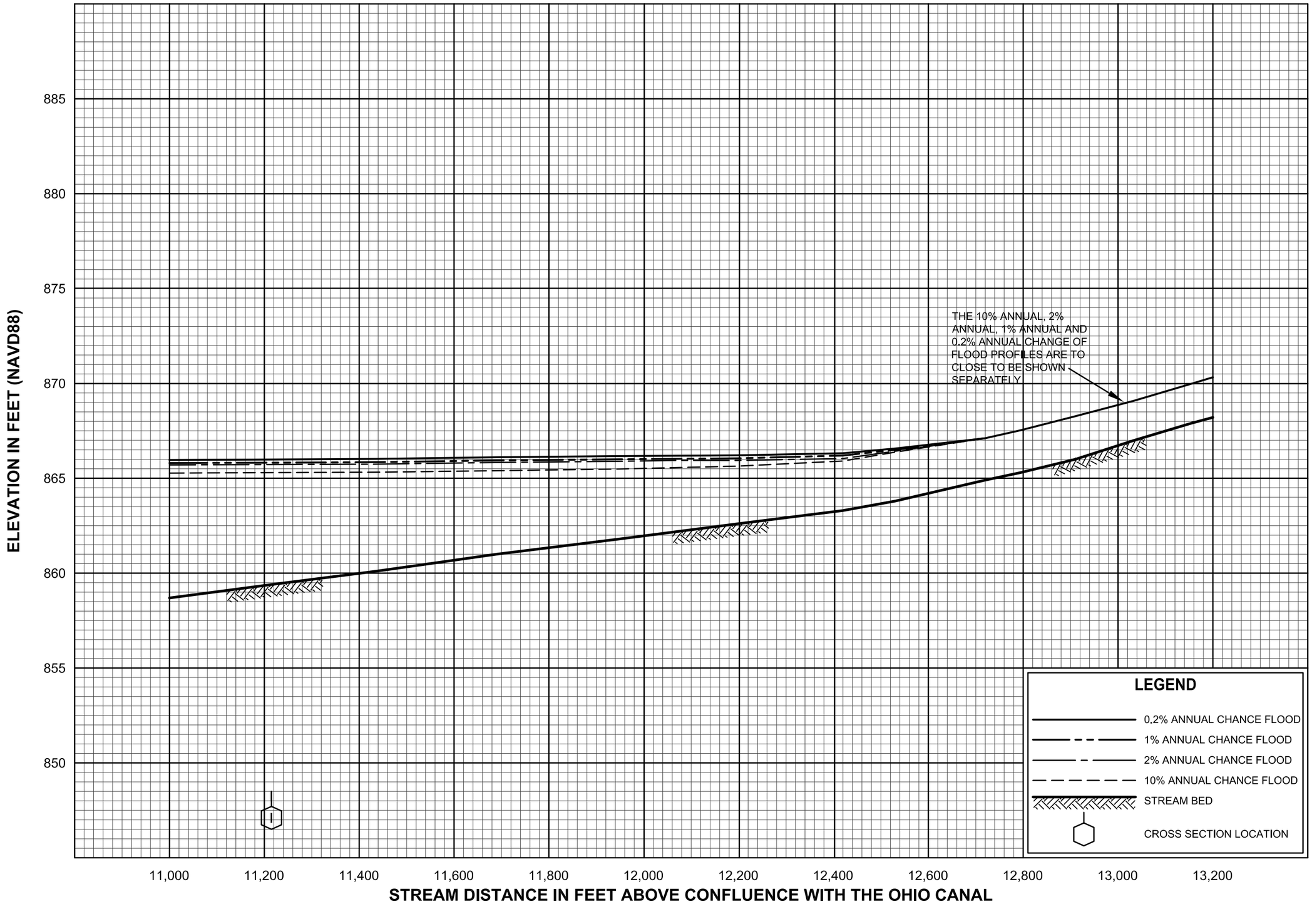
GREENFIELD CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

029P



FLOOD PROFILES

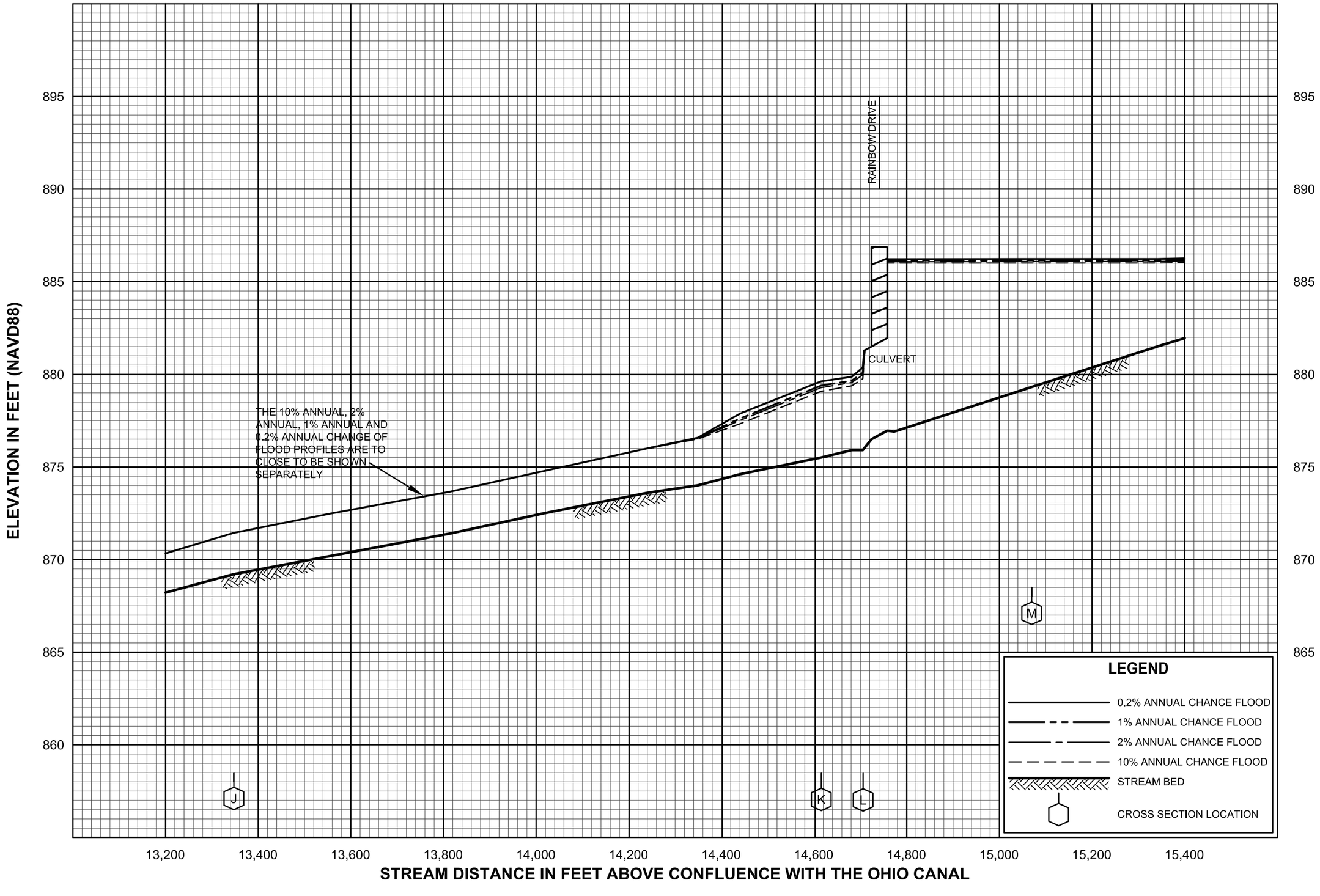
GREENFIELD CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

030P



FLOOD PROFILES

GREENFIELD CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

031P

FLOOD PROFILES

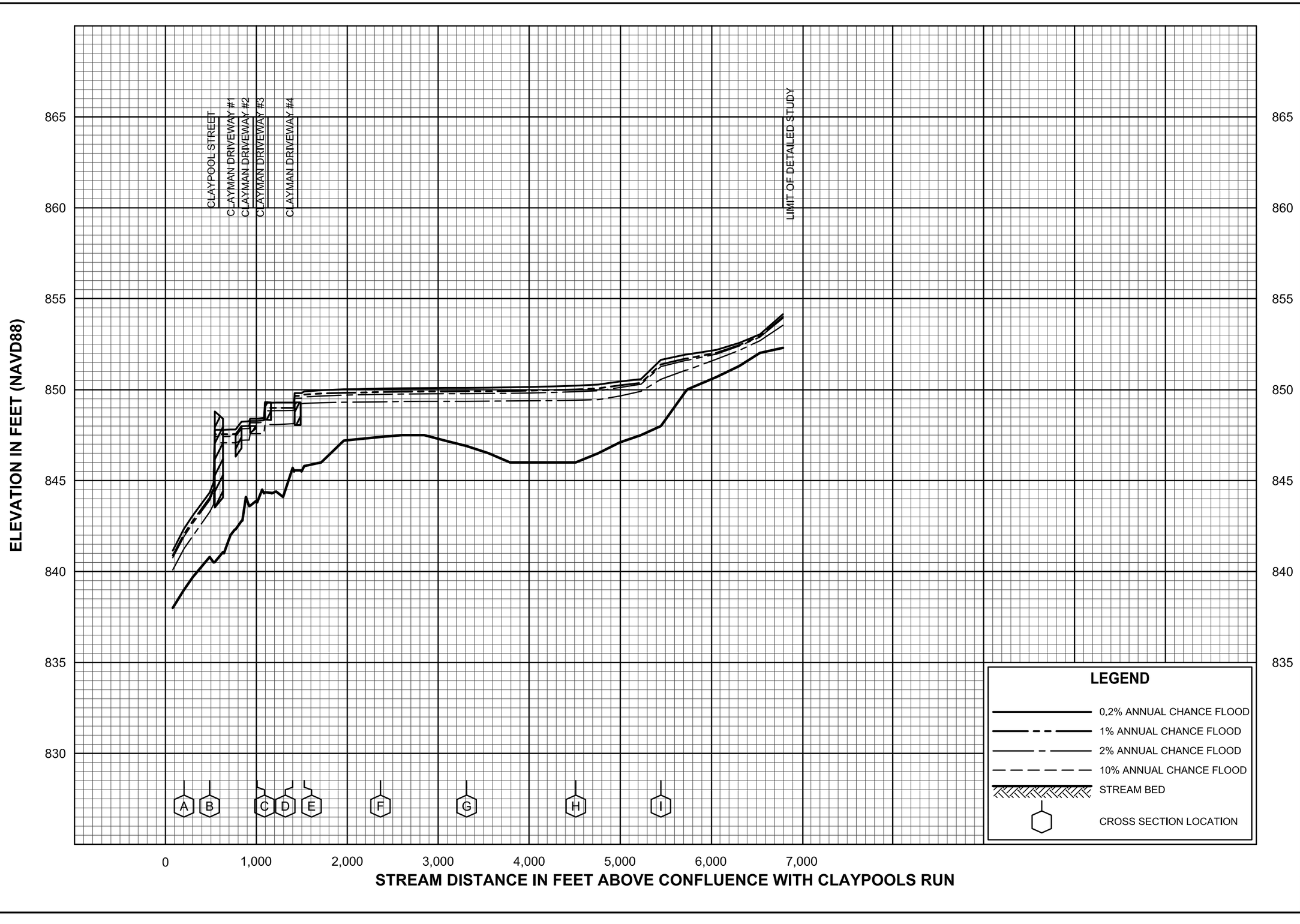
GREENFIELD CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

032P



FLOOD PROFILES

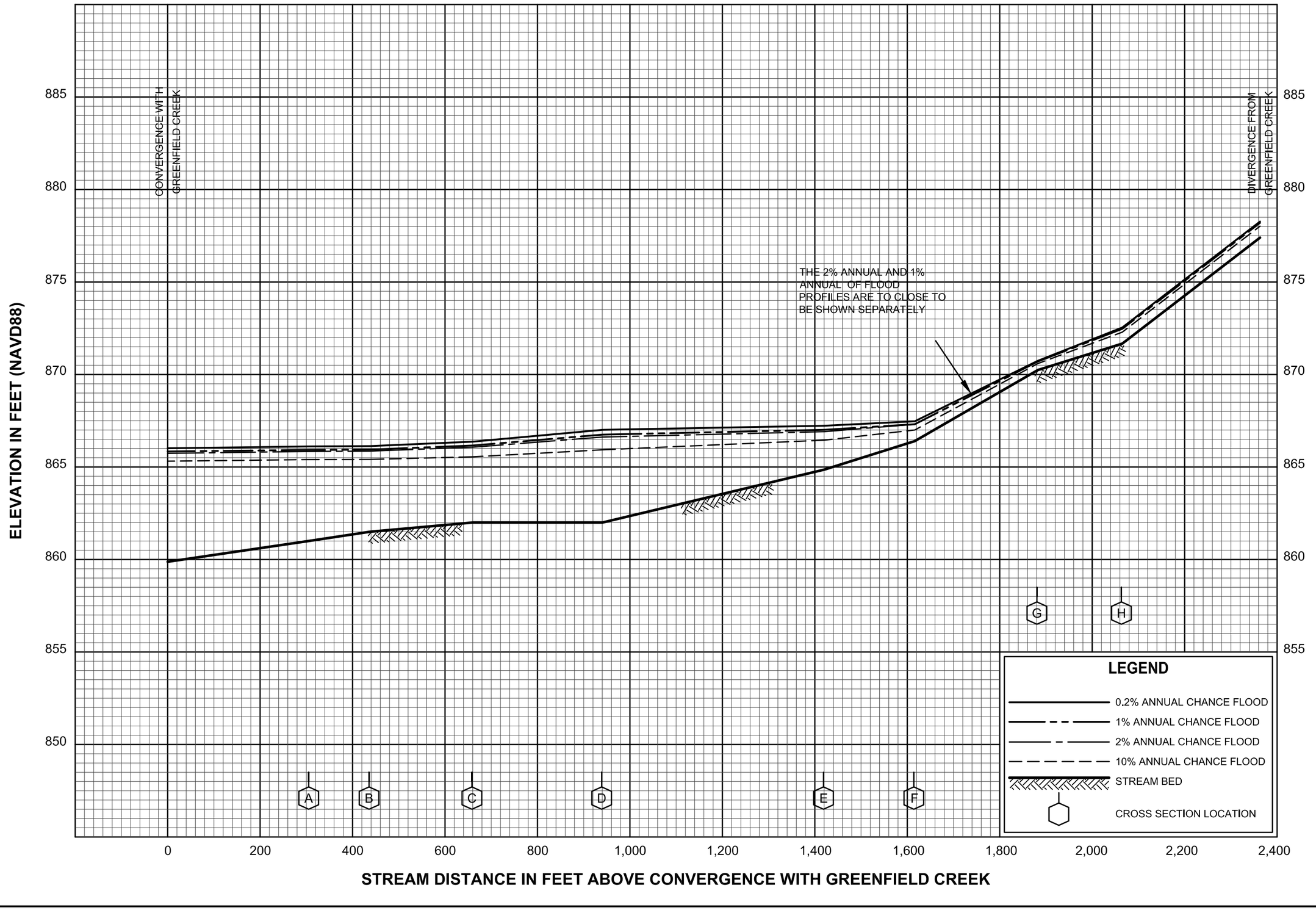
GREENFIELD CREEK ESCAPE

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

033P



FLOOD PROFILES

GREENFIELD CREEK SPLIT

FEDERAL EMERGENCY MANAGEMENT AGENCY

FAIRFIELD COUNTY, OH

AND INCORPORATED AREAS

034P